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THE MARINE CORPS GAZETTE

JUNE 1940

LEGISLATION NUMBER

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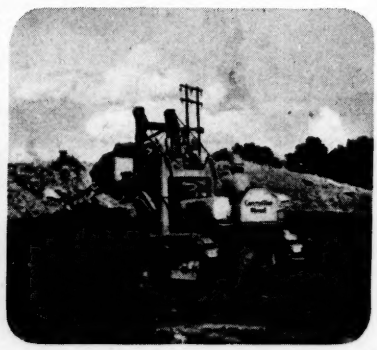
The Camera tells the story!

Puzzling to many a power-user is the odd appearance of a "Caterpillar" Diesel D4 Tractor equipped with a Traxcavator. What does it do? How does it work? The camera tells part of the story here—and shows the usefulness, agility, convenience and simplicity of this outfit! CATERPILLAR TRACTOR CO., Peoria, Illinois.

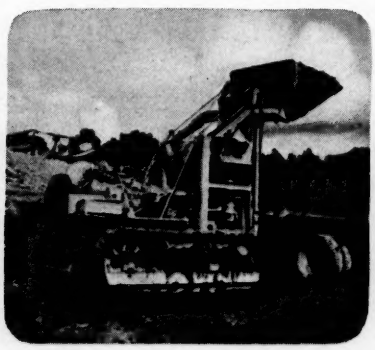
1 This "Caterpillar" Diesel D4 Tractor, equipped with a Traxcavator, is about to load a motor-truck with dirt. Running head-on into a windrow of material, the lowered shovel "takes a good bite"!

2 Now, the operator "guns the elevator" and the loaded shovel starts to rise. (Dirt, rock, rubbish, supplies, and almost any type of movable material can be readily picked up in this manner!)

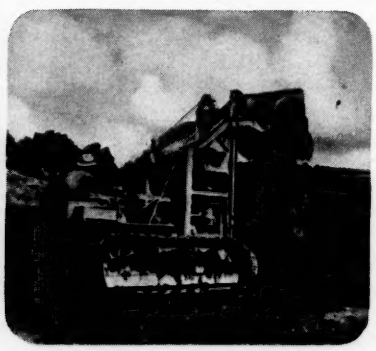


3 The shovel continues climbing with its half-yard load. As it reaches the top, the operator puts the tractor in reverse and backs away from the windrowed material in order to make the turn.

4 Pivoting, with the shovel riding high, the "Caterpillar" Diesel heads toward the waiting truck. Rapid response to clutch and lever completes these maneuvers almost as fast as you read about them!



5 Toward the truck with the loaded shovel! (Note the drawbar on the tractor's rear. When not high-shoveling, it can perform all of a tractor's normal pulling jobs. Also adaptable to bulldozing!)



6 Pull the release . . . the load goes over . . . and now back for another! (Ditching, excavating, laying pipe, pulling posts and pilings are a few other jobs this outfit handles—efficiently and economically!)

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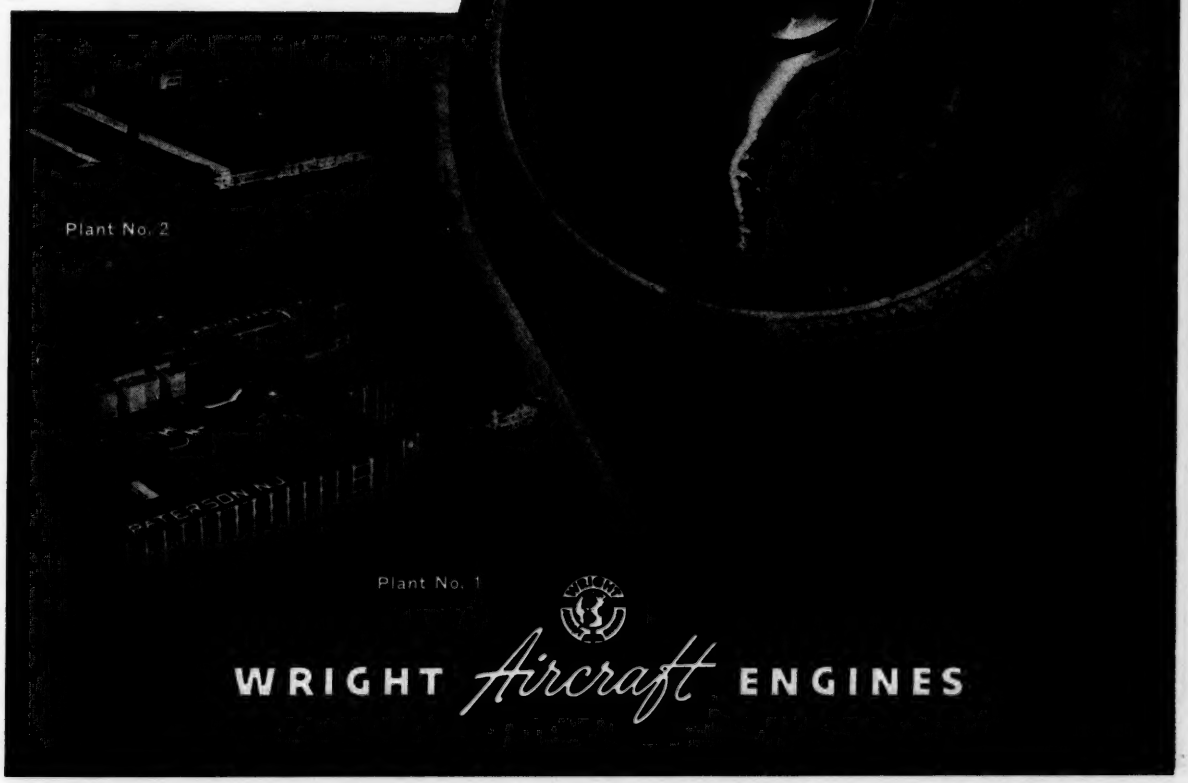

WRIGHT *Aircraft* ENGINES

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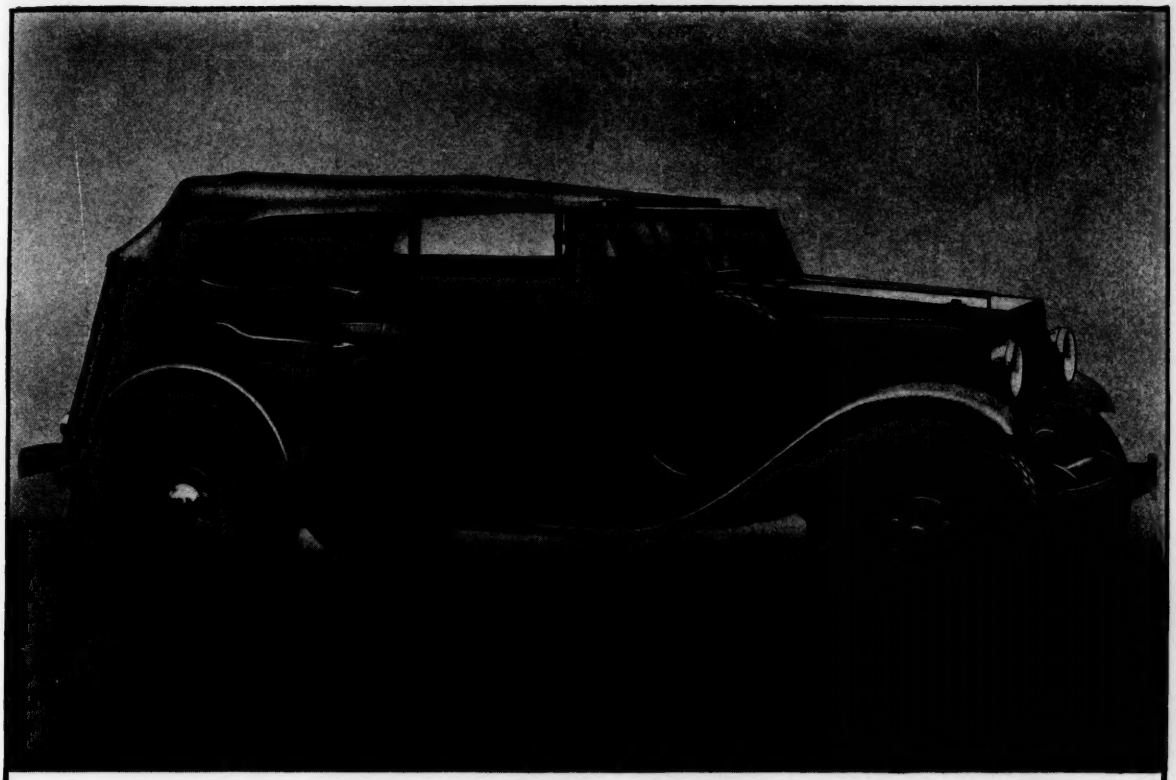
WAR RELIEF
GIVE!
AMERICAN RED CROSS



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THE MARINE CORPS GAZETTE

WASHINGTON, D. C.

Vol. 24 JUNE, 1940 No. 2

CONTENTS

ENGINEERING PROBLEMS OF MARINE BRIGADES 7

LEGISLATION 10

PARACHUTE TROOPS 11

ARMY DAY 14

BRIGADIER GENERAL ALEXANDER A. VANDEGRIFT 14

A TWO-FISTED NAVY 15

THE RECRUITING DRIVE 19

NOTES ON THE M1 RIFLE 24

CAPTAIN TAYLOR BRANSON RETIRES 25

RESERVE AFFAIRS 26

MACHINE GUN PRACTICE FOR SMALL COMMANDS 29

DEFENSE OF AIRDROMES AND LANDING FIELDS 31

A NEW TROPICAL UNIFORM 34

Opinions or assertions in the articles are the private ones of the writers, and are not to be construed as official or reflecting the views of the Navy Department or the naval service at large.

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Neighbors aren't afraid to discuss the state of the Nation, over the backyard fence, are they?

Our parks are unmarred — our homes intact, and our streets still ringing with the laughter of children, aren't they?

Our God is still mightier than our Government, isn't He?

In a word — we are still free men! Chins up, and face-to-the-wind! Strong in our faith! Firm in our priceless heritage!

* * *

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THE MARINE CORPS GAZETTE

LIEUT-COLONEL SHALER LADD, U.S.M.C., *Editor*
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THE MARINE CORPS GAZETTE

Vol. 24 JUNE, 1940 No. 2

Engineering Problems of Marine Brigades

By Captain F. M. McAlister
U. S. Marine Corps

(*Courtesy of The Military Engineer*)

Experimental Type of Temporary Pier.

The opinions or assertions contained herein are the private ones of the writer and are not to be construed as official or reflecting the views of the Navy Department or the Naval Service at large.

THE marine brigade consists of an aggregate of 7,558 officers and enlisted men, Marines and Navy, of which the engineer battalion with a strength of 508 constitutes an integral part. When the brigade is employed as a landing force for which it is primarily organized, it probably will have an aircraft group attached or supporting. The Marine Corps organization tables for the brigade contemplate operations against a limited objective. Extreme mobility gained by the reduction of equipment and material to an absolute minimum, expedites their transportation on either troop transports or men of war.

The adoption by the Marine Corps of Corps of Engineer equipment and methods where practicable is a result of the wholehearted cooperation of that organization in permitting a marine officer annually to attend their regular officers' course at Fort Belvoir, training enlisted personnel yearly in their enlisted specialists courses, permitting the detail of several officers under instruction with the 29th Engineers, the willing exchange of information by the Engineer Board, Fort Belvoir, and on every occasion where their assistance has been requested.

The first requisite of the Brigade Engineer's estimate of the situation will be a special study of the projected theater from an engineering point of view. The brigade study of the theater will be helpful but it will lack information which will be essential for the commanding officer of the engineer battalion to know. The engineer study of the theater will indicate the nature and amount of special equipment and material required and serve as a basis on which to discuss with B-4 the space requirements on transport for engineer equipment and supplies. This space will invariably fall short of desires and will demand a reduction to bare essentials.

Probably the next problem for consideration will be the loading plan of the material and units of the engineer battalion. Each task group, infantry battalion and battery of artillery, will require the assistance of from a platoon to a company of engineers and this personnel with its equipment will be loaded on the same transport with that task group. Normally the engineer detachment will be assigned to the shore party and their duties will be to support the combat team in every way practicable and especially to assist in the unloading of heavy material, clearing of a route of egress from the beach, etc. To accomplish this task the detachment will probably require pioneer, carpenter, and demolition equipment, a liberal supply of wire netting and perhaps a temporary pier. Initially, troops and equipment will of necessity be unloaded directly on the beach but the erection of a temporary pier will expedite the movement of ammunition and supplies and its early erection is desirable.

It should be explained here that the company equipment in the marine engineer battalion is essentially the same as that assigned to similar units in the combat regiment of engineers. Vehicles consist of tractors and trailers. Pow-

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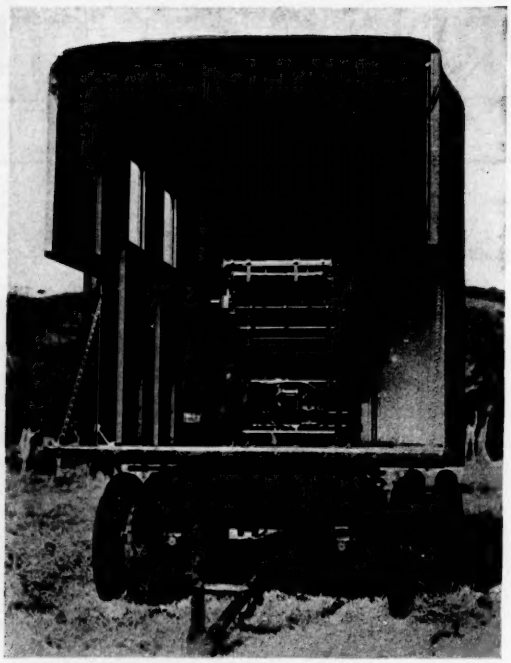


Reproduction Plant Mobile Multilith Trailer

er tools come under the group in Marine Corps equipment tables known as special equipment and the decision of how much of this equipment to be carried rests finally with the force commander and must be a compromise based on the time factor of assigned tasks and transport loading space available.

The Marine Engineer's motto should be "Nothing is impossible with hand tools, it just requires more time."

A typical operating area will probably be a locality completely undeveloped except possibly the barest necessities required for a base having no local supply of engineer matrial, devoid of roads and even trails, and possibly overgrown with heavy impenetrable tropical vegetation. Suitable landing beaches will be few or nonexistent, and routes of egress from beaches totally lacking. The repair of docks will not present a problem, for the beaches on which a landing is feasible will not have any. Maps initially available will at best consist of hydrographic charts.

En route to the theater, the first problem will be the provision of a supply of maps. These obviously must be based on aerial photographs. Should the Marine Corps planes not be immediately available the photographic reconnaissance will of necessity have to be requested from the Navy. The reproduction in quantity of the photographs or of the mosaics after they are laid will be done by the engineer battalion. To accomplish this task the battalion is provided with a multilith press with accessories very similar to the unit in use by the Army combat regiment and previously described in *The Military Engineer*. The essential difference from the latter unit is that this equipment is mounted on two trailers to reduce the weight of individual units. In the meantime the stereocomparagraph will be utilized to provide either a contoured mosaic or map to be issued as soon as practicable. The only control for this map which it is anticipated will be available, will be that which can be taken from the hydrographic chart of the area. While it is not anticipated that this will result in a perfect map or that the control will be as good as if the multiplex projector were used to extend control, it is felt that this is the best which can be accomplished under the time handicap and the restrictions imposed by space aboard ship. Critical areas should of course be contoured first and should these indicate any masks which would interfere with the naval gunfire support the proper authorities must be notified in time to shift gunfire support areas.

In an opposed landing against prepared defense, the first problem which will confront the commander of a landing unit will be the surmounting of beach obstacles. The means of eliminating underwater obstacles and anti-boat booms has not been developed extensively. The use of mine sweepers to remove them by dragging during darkness may prove feasible. Sufficient wire netting to provide a supply in all boats of leading waves for bridging underwater entanglements and instructions for its proper use may be required. The commander of the engineer unit on each transport should be prepared to provide an ample supply of bangalore torpedoes with instructions for their use in cutting both underwater and beach obstacles.

Problems that will confront the engineers of the shore party will be the simultaneous clearing of a route of egress from the beach and the erection of a pier. The necessity for a pier may be questioned in view of the fact that special landing lighters or specially equipped boats will be available which will permit the landing of vehicles directly on the beach over a ramp. This is unquestionably the most expeditious manner of landing these vehicles but if there is a surf of three (3) or four (4) feet breaking directly on the beach it is doubtful if these boats will withstand the pounding which they are likely to receive during the time necessary to beach their load through a succession of landings. Thus if there is too much surf or the surf builds up after the initial landing is made to such an extent that vehicles and other heavy equipment cannot continue to be beached, the temporary pier affords a stopgap. Furthermore although troops may be expected to carry with them supplies and ammunition for the first day's combat, when ammunition and supplies for the additional advance inland begin to arrive loading directly from boats to transportation on

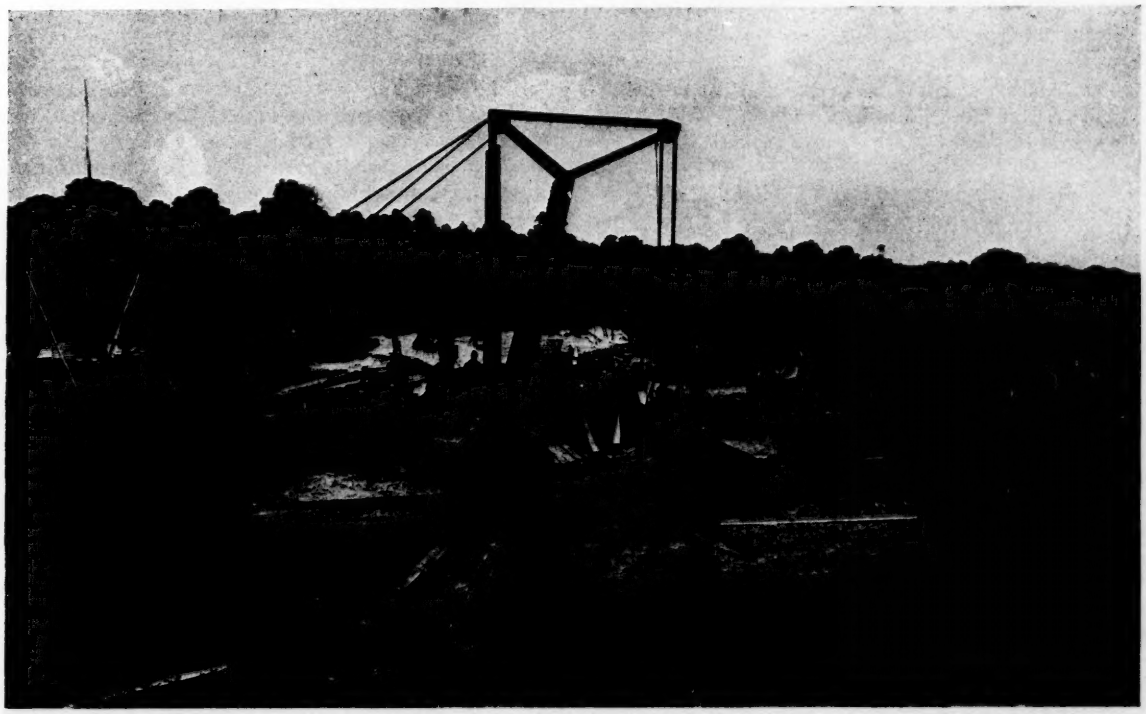
Marines Receive Instructions in Laying Mosaics

the pier will result in a considerable saving of time and effort over that required to unload boats by hand on the beach. Assuming that the six (6) infantry battalions of the brigade may not land on more than three (3) beaches which will not have intercommunication by vehicle, three (3) temporary piers will be ample to provide one (1) per beach. To provide for handling the extra heavy material it is believed one of these piers should have a minimum capacity of 15 tons. The best solution for the pier problem appears to be eight of the trestle spans of the new 10 ton Army ponton bridge connected in tandem, cross-braced between the uprights with flexible cable. At this writing there has been no opportunity to try this pier in practice and consequently there is no actual experience to indicate whether this is a satisfactory solution or not. When the bulk of the 10-ton spans are doubled the handling of loads not to exceed 20 tons appears practicable. For hoisting heavy loads there is provided a two (2) wheel portable crane which utilizes a double drum power control unit of a tractor for power. By the judicious use of this crane it is anticipated that any equipment at present carried by the Fleet Marine Force can be successfully unloaded on the 20-ton capacity pier. By selection of a beach for the erection of the heavy duty pier which expedites the combat plan and combines the best route of egress from the the beach, with the location most sheltered from the action of the sea, all heavy equipment of the brigades may be landed without delay. Although it is not anticipated that motor vehicles in quantities will be sent ashore before the first night, nevertheless the light (pack howitzer) artillery will be assisted considerably in the landing of their ammunition by use of a pier. When it is realized that a single unit of fire for one (1) battery weighs 30,000 pounds, this consideration in itself will justify some sacrifice for speedy erection of these piers.

Concurrently with the erection of the pier the engineer detachment of the shore party will be faced with the clearing and preparation of a route of egress from the beach. Wire netting will provide a possible road base across the sand beach. The first requirement will be for hand carts, later for tractors and finally for trucks. Initially this work must be done with hand tools, but included under special equipment is a 10-foot blade leaning wheel type of road grader for ditching and crowning of roads. Based on the intention to reduce combat transportation to an absolute minimum and utilize a shuttle system for moving supplies forward every improvement of roads will increase the speed of operation of the trucks over these roads. As the terrain over which it is expected to operate will undoubtedly be rugged any reduction in the size of this grader will require additional blasting and grubbing by hand for the preparation of roads.

The above mentioned road grader will probably be initially assigned to grade a main supply road forward from the heavy duty pier. As for resources for a road surface every advantage must be taken of the beach sand available; such rock as may be found; and any timber available suitable for corduroying. To utilize any available rock there is included in the special equipment a portable rock crusher which drives from the rear power take-off of a tractor. It is extremely doubtful if there will ever be space available for carrying special road building material. It is believed that with the supplies mentioned above roads can be maintained in all weather except the most extreme.

(Continued on page 56)



Two-wheel Portable Crane Hauling Load of 10 1/4 Tons.

XUM

LEGISLATION

By Lt. Col. Charles A. Ketcham, U.S.M.C.R.

Warrant Officers

Bill H. R. 6044, to regulate the number of warrant and commissioned warrant officers in the Marine Corps, passed the House of Representatives June 1, 1939, and passed the Senate April 10, 1940, with an amendment providing that the total number of warrant and commissioned warrant officers shall not exceed two hundred and eighteen. The two houses will have to come to an agreement before the bill goes to the President. Should the bill be passed, it will mean that the number of warrant and commissioned warrant officers in the Marine Corps, including their distribution in the warrant and commissioned warrant grades, will be as the President may from time to time deem necessary, subject to the total number of 218, if that limitation remains.

Naval Appropriation Bill

The Naval Appropriation bill (H. R. 8438), making appropriations for the Navy Department and naval service for the fiscal year ending June 30, 1941, provides for the pay and maintenance of the Marine Corps and Marine Corps Reserve for that year. As originally considered by Congress the bill carried sufficient funds for 25,000 enlisted men of the regular Marine Corps. Before final passage, however, it was amended to include, under the title "Emergency National Defense Appropriations," provision for 9,000 additional enlisted men on active dutv, making the appropriated strength for the year 34,000. The totals carried in the bill under Marine Corps appropriation headings, follow:

Pay, Marine Corps	$28,753,658
Pay of Civil Force, Marine Corps	633,240
General Expenses, Marine Corps	21,845,808
Total	$51,232,706

Additional appropriations for the benefit of the Marine Corps, under the Emergency title, Navy Department Bureau appropriation headings, are contained in the bill for:

Medical Department	$ 12,000
Temporary housing, including extensions of existing structures	4,500,000
Ordnance and ordnance stores, Navy	4,899,000
Radio material	100,000
Total	$9,511,000

Marine Band at G. A. R. Convention

A bill (H. R. 9296) to authorize the attendance of the Marine Band at the Convention of the Grand Army of the Republic, to be held in Springfield, Ill., from September 8 to 13, inclusive, 1940, passed the House and on June 6 was reported to the Senate by the Senate Naval Affairs Committee. It authorizes an appropriation of $7,655.25 to defray the expenses of the band.

Reimbursement for Fire Losses

A bill (S. 3068) to reimburse Private First Class Earl S. Rogers, in a sum not to exceed $129.75, for losses of and damage to personal property resulting from the fire which occurred at the Marine Barracks, Quantico, became law on 11 April 1940. This is in addition to the $914.88 for reimbursement of other men for losses in same fire, authorized by Act approved June 19, 1939 (H. R. 4084).

Officer Personnel Legislation

Bill H. R. 4929, to amend the Act of June 23, 1938 (52 Stat. 944), by modifying Sections 5, 7, 8, 9, 12, and 14 thereof, as set forth fully in the Service papers, was introduced in the House March 10, 1939, and passed the House April 26, 1939; passed the Senate, amended, June 30, 1939; conference report adopted April 19, 1940; vetoed by the President May 3, 1940.

The Naval Appropriation bill for 1941 contains an amendment prohibiting the involuntary retirement of fitted officers during the life of the present emergency. The amendment reads: "Provided, That no officer of the Navy or Marine Corps who has been adjudged fitted shall be involuntarily retired during the existing limited emergency."

Amendments to Reserve Act of 1938

Five amendments to the Naval Reserve Act of 1938 would be authorized by the enactment of H. R. 9639, introduced in the House on May 2, 1940:

(a) Provide for pay of chief warrant officers in the Reserve.

(b) Permit Reservists to be placed on the honorary retired list on their own application after 20 (instead of 30) years' service.

(c) Provide that Reserve officers shall at all times take precedence among themselves and with officers of the Regular service according to the dates stated in their commissions.

(d) Allow the pay and allowances of the higher grade of rank from the dates of their commissions, to officers of the Reserve who may be advanced to a higher grade or rank; the dates of commissions as determined by the Secretary of the Navy to be conclusive for all purposes.

(e) Allow pay for drills performed on Sundays.

Reserve Armory at Indianapolis

The construction of a Marine Corps Reserve armory in the city of Indianapolis, Ind., would be authorized by bill H. R. 8584 at a cost not to exceed $125,000.

Sons of Veterans to Naval Academy

The Act of June 8, 1926, authorizing the appointment of the sons of deceased veterans of the World War to the Naval and Military Academies, would be amended to read as follows should bill S. 3479, introduced March 4, 1940, be enacted:

(*Continued on page* 55)

Parachute Troops

By Captain John A. White

U. S. Marine Corps

PARACHUTE troops are a fighting arm which requires a power of imagination to understand and a mental elasticity for the very latest in war fashions. The subject is not likely to find favor with the rock-bound conservative, nor with one who, although professing a liberal thought, cannot believe anything which he has not seen with his own eyes. Unfortunately, the progress of this new weapon is not such as to present a history of achievement and success. It is still definitely in a state of development comparable to the gun and powder of the Fifteenth (15th) century. Whether or not it will revolutionize warfare so much as did these innovations is quite problematical. I shall leave that surmisal to you. My following words may crystallize an opinion already formed by you, aid you to form one, or it may leave the subject figuratively as well as literally, up in the air.

Parachute troops by their very nature are modern. The thought is new. "Envelopment of the right flank" and "Envelopment of the left flank" are familiar terms, but "Envelopment from above" is a scheme of maneuver taught at no service school in the United States. A very quick glance makes it a magic cure-all prescription to the headache of an attacking general. Here is something which makes the greatest use of surprise, movement, mass, and offensive. Obstacles, both natural and artificial, are quickly crossed. In short, it is the "approved solution" for "General Attack's" plan of action. Let us examine the experiments through which aerial infantry have been put, the accomplishments which their proponents claim for them, their advantages and shortcomings, and from the examination, analyze the subject and possibly reach a conclusion as to their value in war, and furthermore, the place they may find as a combat arm of the Marine Corps.

Without a doubt, this new arm constitutes, at least theoretically speaking, a highly dangerous means of warfare. It is a weapon which furnishes the high command an opportunity to carry the fire effect deep into hostile territory as well as to wrest the initiative from the enemy by forcing him to fight far behind his own front.

Parachute troops may be employed in various forms of combat. I shall discuss the use of these troops in phases of combat in which they have been tried. I believe that a history, though brief, may be of interest.

The first recorded use in warfare of a soldier operating from an airplane was the feat of a German lieutenant, Von Kessel, who on October 14, 1916, landed by airplane almost sixty (60) miles behind the Russian front, dynamited the Kovno-Brody railroad, and was picked up by an airplane twenty-four (24) hours later.(4)

The Russians were the first to experiment with parachutists and apply the idea on a large scale. The first knowledge the world had of their efforts came from a review of the Soviet Air Force August 18, 1933. Sixty-two (62) jumpers descended simultaneously from three (3) large bombers. (4) Russian civilians followed the lead set by the military men. They have made a national sport of jumping. According to some observers, the young people there have gone into the game with an almost fanatical zeal, and that it has been a common sight of several hundred parachute jumpers in the air at one time. One may safely say that the Russians are quite parachute minded, and the great number of amateur jumpers will constitute a huge reserve from which the army may draw to form air infantry regiments. (2)

The first tactical use was noted in the Soviet maneuvers at Kiev in September, 1935. In these exercises, the Red forces (for in Russia it is always the *Red* forces that beat the Blues) were held. The Red commander decided to carry out an aerial landing in the enemy's rear area at a point thirteen (13) miles behind the front. The account follows: "After securing the aerial protection of the landing by pursuit and bombardment planes, some thirty (30) powerful transports carried forward an advance guard of about six hundred (600) parachutists with the mission of providing the immediate security of the detachment. These men are landed from about twenty-three hundred (2300) feet. Immediately after the advance guard had landed, a second arrival of planes poured out six hundred (600) more parachute men as a first support. Then additional aerial formations appeared carrying the main body of the force in transport planes. These ships came in by successive waves and landed. As soon as the troops had piled out, the planes took off to leave the field free for the next wave. Each wave brought in a thousand (1,000) men. In a half-hour, the debarking of the entire force had been completed. Supported by aviation, this force, numbering about six thousand (6,000) men drove forward against the enemy rear. Vital points were destroyed and key installations overrun. The Red commander had cracked the nut." (1), (4). Let us subject this operation to a brief critical analysis. Perhaps the tactical advantage gained here was not due so much to the surprise effected as it was to the lack of an adequate air warning service. These maneuvers were not war, but were carried out in territory inhabited by friends to both sides. It is very likely that the inhabitants didn't know one side from another, and that they were too busy with their own work to pay attention. For example, how many farmers in the Manassas area last summer do you suppose knew one body of troops from another as they fought the "Third Battle of Bull Run?" War conditions make civilians living in the theatre of operations very conscious of their danger. It will be a poor intelligence service, indeed, that permits an operation, the size of which I have described, to escape the attention of the commander of threatened troops.

Parachute troops may be employed in several ways. Among their missions may be included:

1. Severing lines of communication and supply.
2. Opening and closing defiles and crossings and seizing dominating points of terrain.
3. Cutting off hostile reserves.
4. Attack of ground organization of hostile air forces.
5. Envelopment from above.
6. Reinforcement of own troops. (4)

These missions are best accomplished under the following conditions favorable for the employment of air troops:

1. Absence of, or poorly organized, ground defense.
2. Landing in territory whose population may be expected to support the parachute troops with food, information, vehicles, etc.
3. Landing in rear of a defeated enemy.
4. Good ground and weather conditions.

I have already mentioned the advantages of parachute troops. Surprise, movement, mass, and swift offensive feature their actions and make a most powerful weapon of war. But we must examine the side of the picture which is not so rosy.

Parachute troops have certain shortcomings which tend to limit their efficiency. But do not all of our weapons have some disadvantages? For example, consider a large bombing plane which carries a heavy bomb load, and also a strong armament of machine guns. It, of course, must lack the maneuverability of the fighting plane, but does that disadvantage make it impractical? Decidedly not! You just can't have everything. So let us see what deficiencies that our aerial infantry has. I shall enumerate them first and then discuss them with illustrations.

The shortcomings seem to be:

1. The complete lack of defense of the parachute jumper while floating in the air.
2. The initial disorder upon landing.
3. Their lack of mobility after landing.
4. The lack of supporting arms except aviation.
5. The difficulty of supply.

The complete lack of defense of the parachute jumper while floating in the air reduces his striking power considerably. The time of descent is comparatively long; at the rate of fall of thirteen (13) feet per second, a descent from the favorable altitude of three thousand (3,000) feet requires almost four (4) minutes. Landings in peace time have been made in broad daylight. Such were the landings made by the Russians in the recent war with Finland. The first use made of parachute troops was in the Petsamo district on 2 December, 1939. The attack evidently was not planned in coordination with the G-2 section, for the Russians landed just where the Finns were waiting for them. I believe that you are familiar with the result. The Russians' first use of these troops, of which the world eagerly waited for news, was an utter failure. The Red soldiers were picked off in the air by the alert Finns, and then were completely wiped out as they landed. They made such excellent targets in the air that we have no way of determining their mission after landing. (3) However, a possible means of overcoming this shortcoming is to reduce the time of descent. Of course, this is accomplished by the jumper delaying the opening of his parachute until he is within five hundred (500) feet of the ground. How effective this would be and how much doctrine a body of troops could absorb in this military duty, previously regarded as a circus or county fair stunt, I must leave to your surmisal.

Other efforts by the Soviet forces to use parachute troops, the latest of which was February 6, were made. This time it was reported that the Bolshevists attempted a raid for the purpose of blowing up a railroad bridge well behind the lines. A swift ski patrol was sent to meet them, and within a half-hour had killed or made prisoners of the entire party. (5), (6) This failure illustrates the other three (3) weaknesses of this modern arm: their initial disorder on landing, their lack of mobility, and the lack of supporting arms except by aviation.

Perhaps the greatest weakness of all is the difficulty of supply and of reinforcement. A protected route from our main body to landed units is desirable. As long as air superiority is maintained, the problem of supply does not present a great difficulty, as numerous instances of air transport recently will attest. The outstanding example of this was in Ethiopia where the Italian army transported by air the necessary supplies for entire army corps. "Caproni 133" planes with a wide range and capable of carrying fifty-five hundred (5,500) pounds were used. By reducing the safety factor from 6.5 to 3.0, the carrying capacity was doubled. It was proved that the airplane now takes its place among the military methods of transport. (1) But in regard to parachute troops, when the enemy gains control of the air, even locally, and communication and supply stop, the position of the men on the ground becomes precarious and grows more so. Remember that the defense of such a body of troops cannot be as well organized as we are accustomed to find. No wire entanglements, and a limited number of digging tools will restrict the defensive measures. Also, keep in mind that the mission of such a force, if to sever lines of communication, will not be furthered by digging in and defending. They must strike, and strike fast. Any actions which do not operate to accomplish the mission must be regarded as worthless. These shortcomings are very serious, and an approved solution to the problem seems rather visionary.

At the present time the meager reports of the action on the northern front do not permit us to make any definite conclusions as to the value of parachute troops. Neither time that sky infantry were used did the jumpers number more than fifty (50) men. (6) A natural question is if the Russians had trained as many troops in jumping as had been announced (estimated at 60,000 (1)), why did they use them so sparingly? Surely there were Finnish supply routes which would have proved lucrative objectives to disrupt, but there is no record of any large scale attempts. Of course, the season of the year was against them. A map reconnaissance of the area on which to land would be of little use when a heavy blanket of snow conceals any terrain features necessary for orientation. And the initial disorder on landing would be considerably heightened for soldiers to get organized after landing in deep snowdrifts. Yes, the season of the year made conditions unfavorable, but isn't winter a poor time for any military operations? That didn't seem to affect the decisions of the leaders who

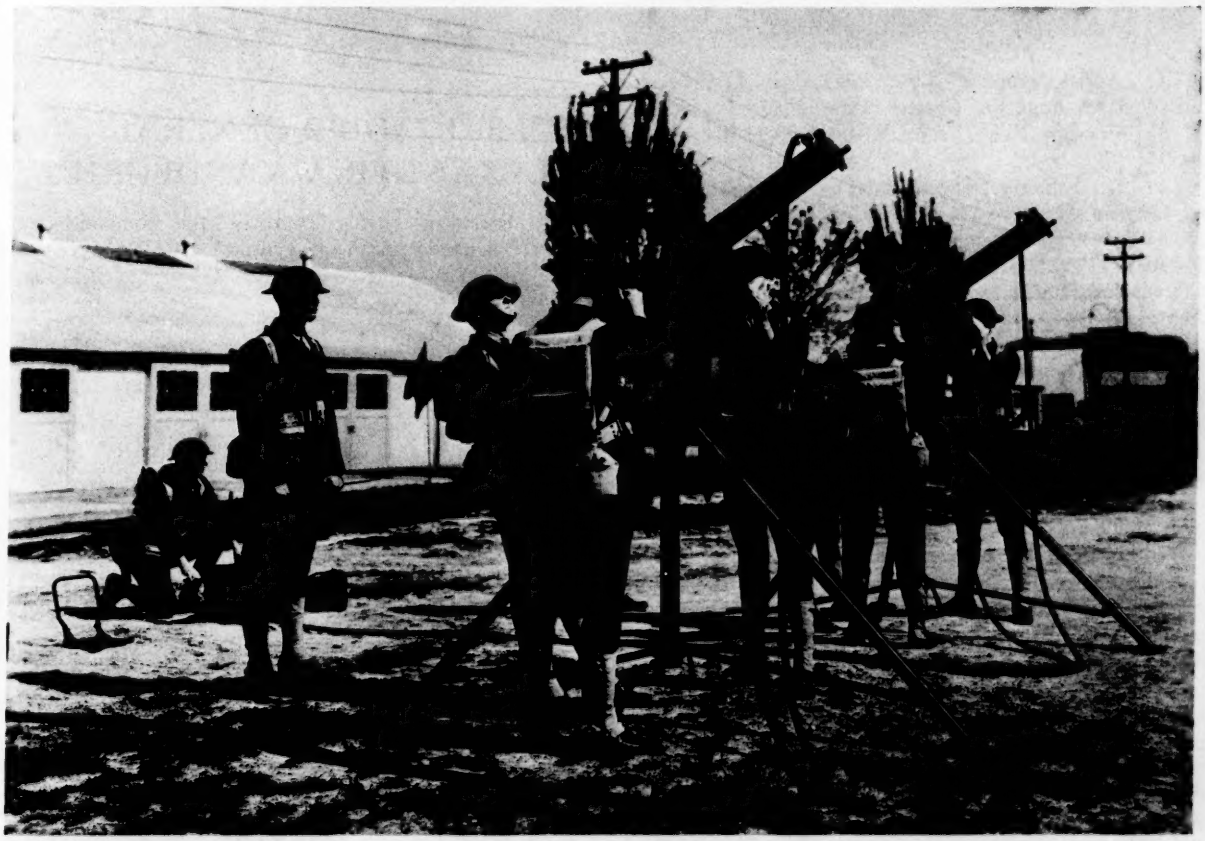
directed the bloody campaign of the onslaught on the Mannerheim Line. The Russians made their advance with an appalling expenditure of artillery, airplanes, tanks, and lives. We might at this point ask ourselves a question: Isn't it reasonable to expect that considering the major effort made, that some opportunity would have presented itself to use parachute troops in mass?

The Germans have been reported to have used sky jumpers in Norway, but their value and capabilities were not pulicized. The reports indicate one thing: that the Germans have these troops and may be expected to use them again.

Another possible reason for the scarcity of parachute troops in the Russo-Finnish War may be found in the very source of the idea. Russia is a land in which for over twenty (20) years a new order has risen. Radical thoughts have flourished. The will of radical leaders has been ironclad. They tried anything as long as it was new. Political commissars have influenced the management of the army. It is within the realm of reason that the idea was forced on the army originally and that political pressure made military leaders continue their use during peace-time maneuvers. But in time of war, the slow thinking, one cylinder-minded, and short-sighted officers who had moved into high commands through purges of their too political-minded colleagues, controlled the army and soon discarded the fanciful "Flash Gordon" weapon in favor of the older and approved methods ot mass murder which characterized the attack of the Karelian Isthmus several months ago.

One use of parachute troops which is quite possible is the re-inforcement of friendly troops. The prospect of rushing forces to a threatened flank or in support of a besieged position are real feasibilities. The shortcomings previously mentioned apply chiefly to landings made in hostile territory. The lack of mobility, initial disorder on landing, and lack of support are not fatal defects to aerial infantry landing on friendly terrain as reinforcements. However, one requirement must be met, at least locally, and that is control of the air. Without this vital prerequisite, the descending troops are subject to the same dangers as those who land in the face of resistance. Their chances of success are reduced to practically nil. With adequate air support, reinforcement by air may be carried out. So we may conclude that parachute troops and those transported in mass by numerous large transport planes may find considerable application.

The thought of such operations indicates a trend of the future. No matter how the present war ends, the great powers of the world will possess colonies. Colonial troops of the future will be of a highly mobile quality. Those of you who remember the opening scene of the book and picture "Beau Geste," of thirteen (13) years ago will recall the untimely relief of the French garrison in the outlying desert fort. That garrison had been attacked and killed



Anti-Aircraft guns are a part of the equipment of the U. S. Marines of the Fleet Marine Force, stationed at Quantico, Va. These 50 calibre weapons are of growing importance due to the development and use of airplanes in modern warfare.

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to the last man by a roving band of desert marauders. Had radio and parachute troops been available then, the highly interesting and entertaining story of Mr. P. C. Wren's would never have been written.

Considering the foregoing, let us see just how practical sky infantry may be in the Marine Corps. From the discussion of landing troops in hostile territory, their use in that capacity does not appear to be warranted by Marines any more than by other military organizations, but we must admit that 1940 may see a revision of this view. In addition, to the discussed shortcomings another factor must be considered as being singular to the Marine Corps. For the greatest effect, parachute troops must be used in mass. To land them in less force than a regiment would not serve the purpose of severing a line of communication for enough time to really weaken an enemy position. Our Corps is not large, and even in time of war would not be of such a size as to justify a regiment used for that sole purpose. Nor would it be likely that we would have sufficient planes for that use alone. Sound tactics (if you believe that parachute troops are based on sound tactics) dictate a use in force. Parachute troops would be out of proportion in a picture of the wartime Marine Corps.

However, the use as colonial troops may find application if the Marine Corps takes up service again in Latin American countries. We may expect to see a new marine, a "Jumping Leatherneck."

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ARMY DAY

27 March, 1940.

My dear General Marshall:

The celebration of Army Day again recalls the cooperation and cordial relations which have always existed between the U. S. Marine Corps and the U. S. Army.

On behalf of the entire Marine Corps it is with pleasure that I extend to the officers and men of the Army our greetings and best wishes on the occasion of another Army Day.

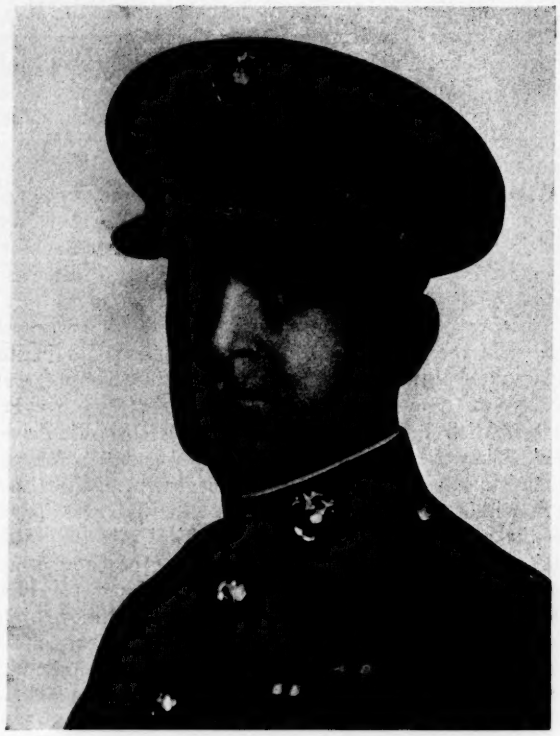
With highest regards and personal good wishes, I am,

Most sincerely,

T. HOLCOMB,

Major General Commandant.

General George C. Marshall, U. S. Army,
Chief of Staff,
War Department,
Washington, D. C.



Brigadier General A. A. Vandegrift, U.S.M.C.

BRIGADIER GENERAL ALEXANDER A. VANDEGRIFT

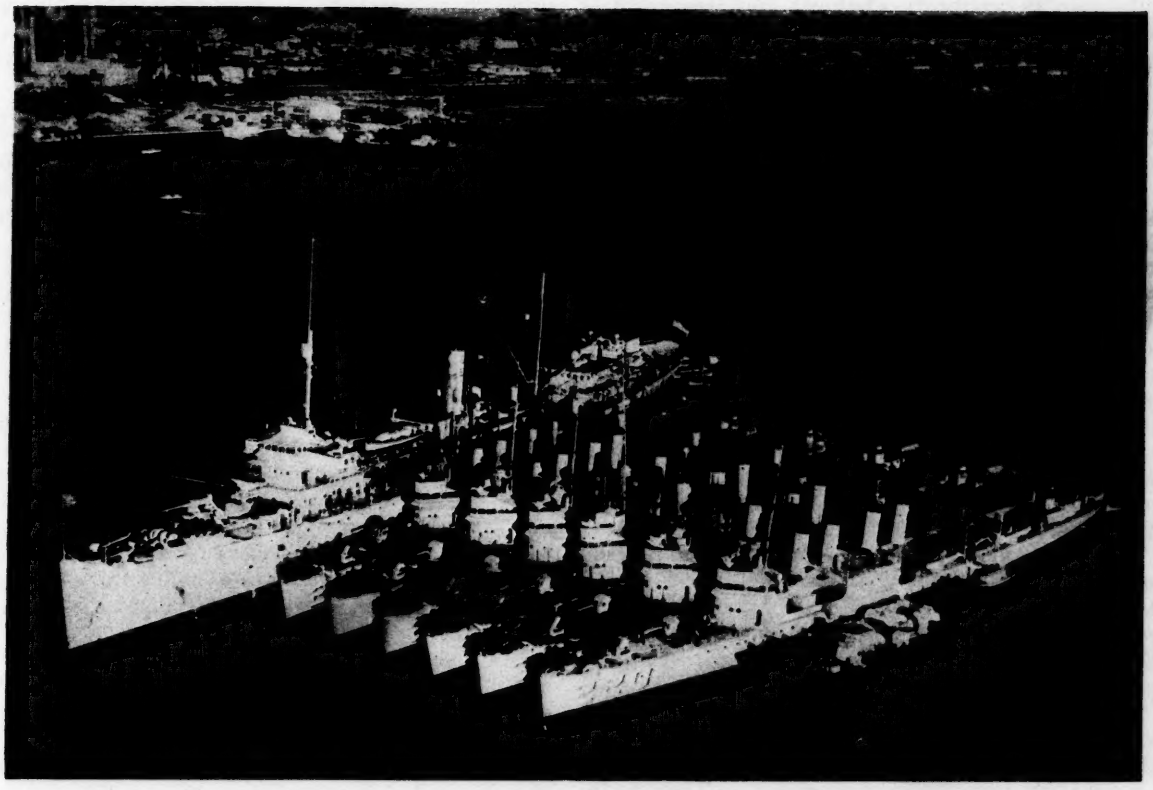
The President having approved the promotion of Colonel Alexander A. Vandegrift, U. S. Marine Corps, to the rank of Brigadier General, he was promoted to that rank on April 1, 1940.

General Vandegrift is a native of Virginia, having been born at Charlottesville on March 13, 1887. He entered the Marine Corps as a second lieutenant January 22, 1909, and was promoted successively through the various grades to that of Brigadier General. He is now serving as Assistant to the Major General Commandant of the Marine Corps, having assumed that position on March 1, 1940.

General Vandegrift has seen service in Mexico; Haiti; Panama; Cuba; Nicaragua, and China. He participated in the assault on Coyotepe, Nicaragua, in 1912, the occupation of Vera Cruz, Mexico, in 1914, and in operations against hostile Cacos in Haiti in 1915.

General Vandegrift served with the Gendarmerie d'Haiti from 1916 to 1918, and again from 1919 to 1923. He was awarded the Haitien Distinguished Service Medal, and was twice awarded the Medaille Militaire of Haiti by the President of that Republic.

In addition to the medals previously mentioned, he holds the Nicaraguan Campaign Medal, Mexican Campaign Medal, Haitien Campaign Medal, Yangtse Service Medal and the Marine Corps Expeditionary Medal.



A Two-Fisted Navy

By Mr. Chas. Weil

IF the United States should lose command of their sea approaches, they can be invaded, as well as blockaded. Enemy forces of flotilla craft, stationed off Gibraltar, the Channel ports, the Azores, Cape Verde, Ascension, Singapore, Guam, the Bonin or Marshall Islands, might be as effective to stop almost all our foreign trade as if hostile battlefleets stood immediately outside Sandy Hook or the Golden Gate.

At least America need fear territorial aggression from no single power as long as we maintain a navy second to none, supreme in the western hemisphere. Behind that naval screen our man power can be trained and our resources mobilized to meet any power now existent.

The distribution and balance of power in Europe today is such that no nation or known concert of nations is in a position to detach the forces necessary to attack us. Such an effort would expose enemies to attack in their rear. The same is true of Asia.

But what of tomorrow: What if there be a redistribution of power overseas? Powers often work in concert. We have no allies. Were a strong naval coalition to challenge us, our fleet could be contained or actually destroyed. That would be possible if two or three large European powers, whose rears were secured by force or diplomacy, joined in attacking. Likewise, if a trans-oceanic hegemony should be created which, with its rear secured by having disarmed neighboring states, and which could outbuild us on the sea by virtue of the economic strength it would acquire, should attack us.

A large European fleet and another strong naval force from Asia could wipe us off the seas. Of course, if each force aproached us in its own ocean we might, we hope, exploit the advantages of central position and interior lines afforded by the Panama Canal, to meet one and then the other, and defeat them in detail.

But the question arises whether such enemy fleets would not join outside our waters. No doubt there would be logistic difficulties to such concentration. But there is no such word as "impossible" if a European navy has no fear of meeting a strong American fleet on the way to friendly bases in Asiatic waters, or vice versa.

Also, were there a coalition between a nation with a great navy and another with a great army, or were one nation to combine both an army preponderant in its region and a navy mistress in its waters, we should be faced with serious peril of an expeditionary force to the western hemisphere.

It is that fusion of supreme sea power and land power

XUM

with their air auxiliaries which we must beware of,—that combination which can reach and strike, invest and penetrate, invade and blockade us.

Inasmuch as, by definition, any hegemony would have regionally supreme sea and land power, it is obvious that the creation of such dominion would involve serious risks to our territorial integrity.

A hegemony either in Europe or in Asia would be more than we could cope with. In Europe there are, with Africa, which would fall into the lap of an European hegemony, about six hundred million people, with almost twice our output of coal, steel and electricity. In Asia, there would be even more people, and undeveloped resources we cannot at present estimate.

To go overseas to break a distant blockade by the wielders of such iron sway, would be out of the question. It is the consensus of naval experts that it would take a two to one superiority for any navy to operate far overseas without bases or allies. Being doubtful whether we could even keep pace in naval construction with any such hegemony, we surely could not double its efforts.

Europe certainly, and Asia probably, eventually could outbuild us on the seas. The two together could overwhelm the ship-building power of the merely 230,000,000 people in the western hemisphere, with relative ease. Either could spare expditionary forces to operate against us.

Nor is it likely that two such regional hegemonies, one in Europe and another in Asia, would conflict with each other rather than with us. For we would face both, on the seas, the best highway of communications. They, on the other hand, would meet in arid central Asia, with its paucity of communications and its undeveloped, or rather unknown, resources, over which there is little to fight.

Thus, a hegemony or a coalition can impose hardship upon us, either by distant blockade or actual invasion. Such aggregations of power could defeat or contain our sea forces and subsequently convoy overseas expeditionary forces beyond our power to repel.

There is little that we can do to prevent the creation of a hegemony, save as in 1917, joining with nations resisting the effort to create such a juggernaut of our own peril.

Admiral Leahy, when Chief of Naval Operations, gave his opinion to the House Naval Affairs Committee that a coalition, if it were formed against us by nations such as Germany, Italy and Japan, could probably defeat us.

We have as yet had no experience in dealing with a coalition, and it is to that we must address our attention.

The logical riposte to a coalition is the organization of a counter coalition. But this country is pledged to a lone hand in foreign affairs, to no entangling alliances. Hence, it is unlikely that any nations will engage themselves to come to our help, should we be attacked by a coalition, unless, reciprocally, we engage ourselves to come to their assistance.

Without allies or strongly fortified bases overseas, we are at a great disadvantage against a coalition naval effort or a distant blockade. However, if we must go without allies, we are not pledged to go without oversea bases, operating from which we may have a fighting chance to deal with superior hostile combinations. Such bases might enable us to play our lone hand and so avoid alliances, thus limiting our military association with other powers to instances where the creation of a hegemony may be involved.

A coalition challenge can perhaps be met by having a navy equal at least to the combined navies of all probable enemies. But it would be cheaper to deal with this potential danger, if we can, with a base from which enemy naval forces can be intercepted and prevented from joining, and from which base a distant blockade can be broken.

We are between two oceans. We must, therefore, be prepared to operate in either sea. We can never be certain where our fleet might be upon the outbreak of hostilities. Our naval arm must be, therefore, equipped to operate in both oceans to thwart junctions and break up distant blockades.

There has been much speculation as to the advisability of a two ocean navy. If by such a navy is meant merely to divide our naval forces, leaving one body in each ocean, the proposal would violate principle of concentration. If by that proposition is intended the building of a two power navy, the cost would be excessive, unnecessary and futile, if we have no bases operating from which our battleforce can thwart a junction of superior coalition battleforces.

Better, therefore, than a two ocean navy, whatever that may mean, would be a single fighting body, second to none, with two fists; one in each ocean. But the fists must be the bases from which the punch is delivered.

It is too often overlooked that a navy without a base near the theatre of operations is helpless against a navy that has such a base.

> "Only ships with bases at their disposal are the ships that count. Since bases multiply the number and power of usable ships * * * they are the genuine equivalents of ships." (Ships that Count, Knox, U. S. N. I. P., Oct. 1936, p. 1419).

Before battle, bases with drydocks are needed for fuel and water, to keep ships in repair by scraping bottoms and for maintainance of hull and machinery. Thus, bases permit that concentration of strength in time and position that alone spells victory. After battle, bases are indispensable to rescue damaged units, for repairs, refueling, resupply, and replacements of personnel as well as alterations which battle experience may show to have been necessary.

As Captain Knox put it, as to battle fleet or commerce raiders operating in distant waters, "we can multiply ship power much faster through a new base than through new ships."

When we consider bases, we must also bear in mind the air arm. For it, more than a battle fleet, is dependent on bases to refuel, rest, repair, and take on munitions if it will exercise continuous rather than intermittent pressure. When the air arm has bases it is the most mobile of weapons; without bases it must be transported by ships in crates.

An air base, strategically located, would be the means of bringing our air force to bear against an attempt to create a hegemony by an aerial "blitzkrieg." For it is asserted in some quarters that the United States cannot offer any immediate military threat to a continental nation.

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Hence, they urge we cannot help, for instance, a seapower to resist the effort of a landpower to create a hegemony, since the isue of the war might be decided in favor of the landpower by the exercise of airpower, by sudden air attack on cities or strategic positions before we can make our strength felt.

However, with a base or bases overseas organized, we can bring the mass of an American independent air force quickly to bear upon a decisive point overseas. Thus, by having such overesas air bases the United States can make certain that no hegemony dangerous to its security could be created by a lightning air stroke; whatever one may believe as to the possibilities of the "blitzkrieg."

We have such a position in the Pacific. From the Philippines, if properly fortified, we could prevent the junction of a fleet based on Singapore, with a fleet based on Sasebo, or between a Vladivostok force and a Singapore force. It would be, of course, impossible for us to prevent the junction of fleets based on Sasebo and Vladivostok.

Manila is only 631 miles from Hongkong. Hence, from Manila it is not difficult to patrol the South China Sea and forestall the junction of fleets in that area. Moreover, the distance from Hawaii to Manila (4,767 miles) is shorter than the distance from Aden to Manila (6,398 miles) or from the Cape to Manila (7,126 miles). In fact, the distance from Pearl Harbor to Manila is shorter than from Aden or Capetown to Singapore (5,028 and 5,756 miles respectively).

Thus, any European fleets steaming towards a junction with Japanese or Russian Asiatic forces must pass one of those two points, Aden or Capetown, where it will be observed and reported, unless it will take the utterly impossible route around Cape Horn. And from Hawaii we can "get there fust with the mostest," providing Manila is secure and can act as a major base.

An American fleet operating from the Philippines can intercept and thwart the junction of fleets between the Atlantic and the Pacific; and fleets from three nations, one of which is Atlantic, one of which is Mediterranean, and the third of which is Pacific in origin, and defeat them separately.

The only thing that a Philippine fleet is not in a position to prevent is the junction of Vladivostok and Sasebo forces. But otherwise, a fleet based on the Philippines can meet the kind of a coalition that Admiral Leahy said could probably defeat our fleet.

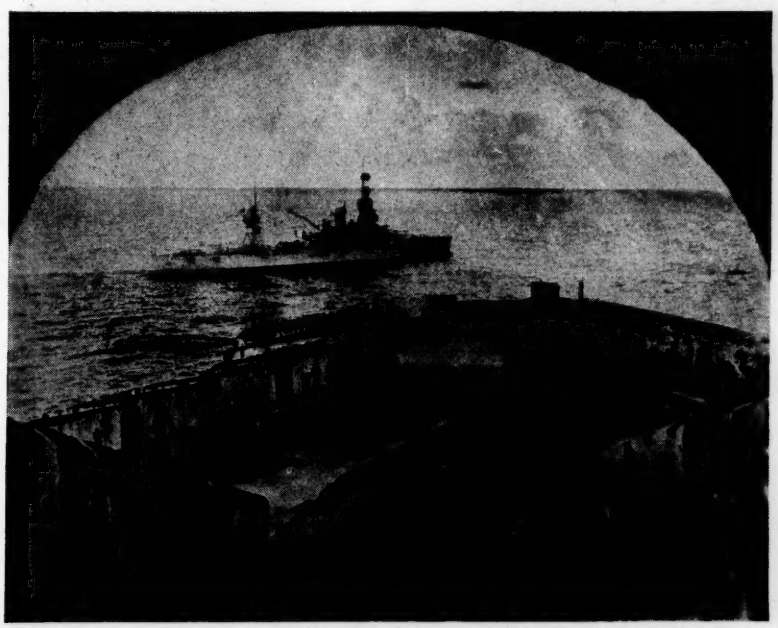
The position, therefore, is one that is central, and permits operations on interior lines against all other strategic lines vital to us in the western Pacific. Hence, Mahan's remark that the Philippines are more valuable as a position than as a possession (Retrospect and Prospect, p. 34).

Also, being close to the coast of Asia, American forces based there could keep open the gateway to Asiatic trade from which we could not be cut off entirely by weak naval forces, as is now the case.

There are many who still urge us to scuttle and run from the Philippines on the ground that those islands are a strategic liability; even though the Filipinos may renounce their quest for independence.

This view stems from the short-sighted and bare assumption that our position there is only to be considered in connection with a most unlikely, single-handed war against Japan alone.

The principal strategic objection raised is that the Philippines are nearly 2,000 miles further from our West Coast than Japan and, therefore, form a "salient" impossible to defend, which difficulty is compounded by the Marshalls, Carolines and other islands owned by Japan placed athwart the communications between Hawaii and Manila. (*Continued on page* 45)



The Leatherneck

The U.S.S. "Wyoming" leaving San Juan, P. R., Harbor.

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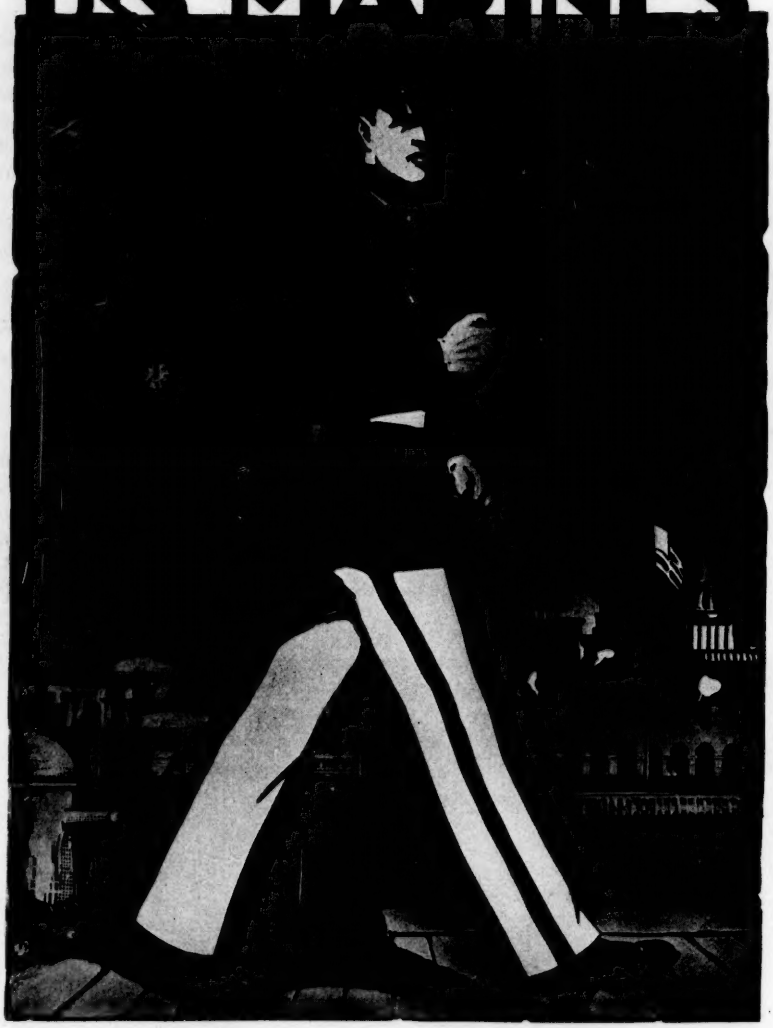


"WALKING JOHN"

The Recruiter's favorite

The Recruiting Drive

By Colonel Frank E. Evans
U. S. Marine Corps

WHEN the emergency recruiting drive towards the goal of 25,000 men for the Marine Corps was inaugurated early in last September, the Corps was approximately 6,700 short of that goal. It ended in the first week of February with the ball on the six-inch line, almost a full month ahead of the general estimate. In that span of 127 working days the recruiting service had enlisted a total of 7,939 recruits to reach its goal, and to fill the gaps of service attrition. This represented a recruitment of 65 men daily and, as the movement gained acceleration, a daily recruitment of 100 men per day was scored in the month of January.

Hardly was the ink dry on the letter that warned of plans for a radical expansion before, on September 5, a despatch was received from the Major General Commandant ordering the drive. On that date the set-up of the recruiting service comprised four divisional, sixteen district headquarters and two sub-stations, namely at San Diego and Washington. When the goal was reached on February 3 the number of district headquarters had been doubled, and the sub-stations had been expanded to a total of eighty-three.

The personnel at the beginning, and at the end of the drive, was as follows:

	Marine Corps		Navy	
	Officers	Enlisted	Officers	Enlisted
Beginning	17	81	17	17
End	35	350	36	64

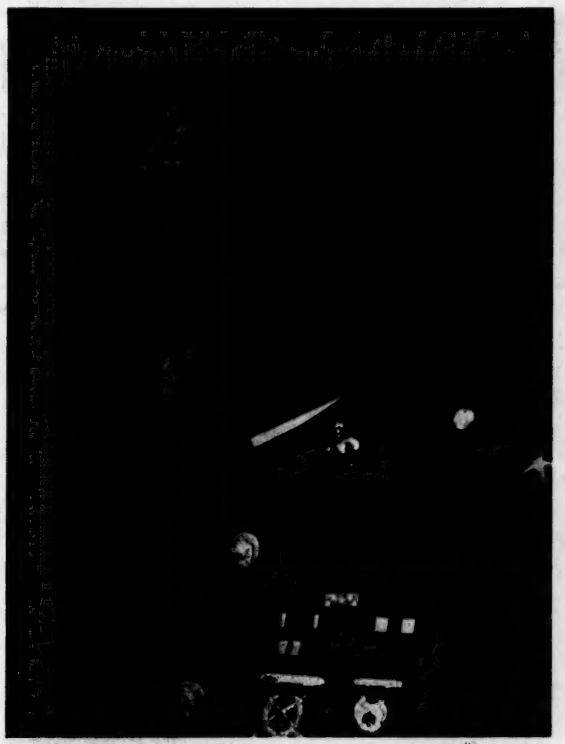
For the six months just prior to the drive there had been enlisted a total of 2,270 men, an average of 378 men per month per division, to fill the needs of the service.

The Central Division came to the tape at the end of the emergency period with a total of 2,189, eclipsing the previous entire service six-month record by 81 men. It was closely followed by the Southern with 2,106, the Eastern with 2,062, and the Western Division with 1,582. Each month the totals increased with faster tempo, and January rose to a decided peak that bore tribute to the smoothly running machine.

As contrasted with the meager personnel that faced the emergency the set-up at its end is shown as follows:

Divisions	Districts	Sub-Stations
Central	3	0
Southern	4	0
Eastern	4	1
Western	5	1
Central	8	20
Southern	9	19
Eastern	9	27
Western	6	17

The ten leading districts throughout the drive scored the following totals:



Brigadier-General E. A. Ostermann, Adjutant & Inspector, U. S. Marine Corps

Los Angeles	WRD—699
Chicago	CRD—614
New York	ERD—523
Dallas	SRD—468
New Orleans	SRD—416
Detroit	CRD—412
Baltimore	ERD—329
Philadelphia	ERD—303
Savannah	SRD—303
Chicago	CRD—295

It is worthy of note that in the ten leaders Detroit was the only newly established district. In the establishment of the new districts there were unavoidable delays that hampered recruiting in its early stages. As these handicaps were met many of them began to keep pace with the leaders, notably Raleigh and Oklahoma City in the Southern, and Pittsburgh in the Eastern Division. At the peak of the drive the 673 enlistments by the Southern Division in January established the record for peace-time enlistments in the history of Marine Corps recruiting.

The end of the drive, coming with as startling abrupt-

XUM

ness as marked its inception, found the recruiting service in high gear, fully equipped to roll along at an accelerating rate. Officers and men were functioning smoothly and tirelessly. New recruiters had been trained to a high point of efficiency. All forms of publicity had been developed to their peak. The Major General Commandant had called upon the recruiting service to perform "the paramount duty" of the Corps, and the recruiting service had lived handsomely up to that call.

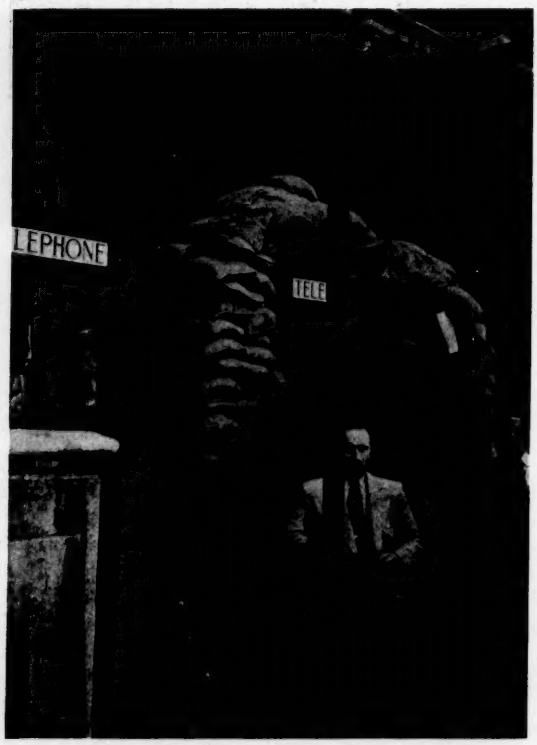
Certain comparatively unproductive districts and all of the eighty-one new sub-stations were ordered to be closed in thirty days, allowing the legal notice to lessees of occupied commercial space. Excess recruiters were returned to their stations, and the number of chief pharmacist's mates in each district was reduced from two to one. The number of recruiting trucks was likewise reduced from two to one in the retained districts. Excess supplies were returned to their base in Philadelphia.

The success of the drive was particularly gratifying when it is remembered that throughout its length the Army, Navy and National Guard were working at top speed and full capacity in similar intensive drives.

Lessons of the Drive

The drive, with its rapid expansion of activities, its invasion of untried territories, while it scored a smashing success, should be of chief interest and practical value in a study of certain defects and delays of administration and supply that hampered the early stages of the drive. This study may point out remedies that, if they can be adopted, will ensure early and rapid production should a similar, or greater, emergency arise. Three cardinal factors that operated to delay in the early weeks were the influx of untrained and often unsuitable recruiting personnel, delays in the reception of initial supplies, delays in securing adequate and suitable recruiting space.

Paris



Telephone Booth, London

The new districts were manned by twenty officers detailed from various stations, few of whom had had previous recruiting experience. Many of the initial draft of recruiters were wofully lacking, at least in the Southern Division, of the vitally necessary clerical qualifications, or in adaptability or lack of service.

After the first month, with its trials, ended, the officers temporarily assigned were returned to their stations, relieved by the detail of retired officers, many of whom had had recruiting experience. From observation in the Southern Division the temporary officers were faced with a herculean task in finding space, organizing their districts, training new personnel and building up that vital element, publicity. They had no one on the spot except one experienced recruiter, acting as first sergeant, on whom to lean. To a man they enjoyed their task, and returned to line duty with an appreciation of the problems of recruiting.

XUM

The retired officers who relieved them found themselves with recruiting quarters either of a temporary nature or with unsuitable space, to be remedied later when desirable commercial space was approved. But the ground had been broken and recruits were coming in. Without exception they performed yeoman service for the rest of the drive, being equipped with years of past experience, and imbued with the zeal of the old fire horse who hears the call of the siren and goes places, happy to be back on duty and amid a service atmosphere.

Securing Space

The comments and recommendations that will follow on this and other vital points that must be met in an emergency recruiting drive are a symposium of the experience of all officers who participated in the drive. They have been collected not only from those experienced in recruiting and on duty at the start of the drive, but from others who aproached the task with a fresh, unstereotyped viewpoint. From them came valuable observations. All officers agree on the salient points.

The comments that follow on the salient points of the drive are offered wholly in a constructive spirit, not in a carping mood. The recruiting service fully realized that an emergency must be met with improvisation, with due appreciation that the powers above them were faced by an emergency, and confident that every possible cooperation would be extended by the Recruiting Section of the Adjutant & Inspector's Department, and the Quartermaster. If the experiences of the recruiting service, and its recommendations based on those experiences, will contribute to the solution of the next emergency, the object of this article will have been fulfilled.

Securing Recruiting Space

To establish a new District the Officer in Charge must first use every effort, for the sake of economy and desirability of location, to secure Federal or other rental free space. Several years ago, for reasons of economy and the stablization of recruiting, the Marine Corps relinquished several stations, mainly sub-stations, that had been occupied in Federal, State or municipal buildings. The Army and Navy were enabled to maintain such stations. When the drive began a recruiting officer was almost invariably confronted with the fact that little or no space was to be had in these rental free locations. The multiplication of Federal, State and City bureaus had gone on in a swift pace and "alphabetical atrocities," as they have been labeled, had preempted the desirable and adequate space.

When the formal application for this space had been denied, there were two alternatives. One, to accept wholly inadequate and poorly located space in their basements; the other to secure desirable commercial space within budget limitations. Applications for either by letter is almost invariably futile. Personal solicitations by a commissioned officer are necessary.

In the search for rental free space it was at times possible to have recourse to temporary space while the search for permanent or commercial space was pursued. Federal and other officials were, with few exceptions, glad to cooperate, but their hands were tied. Temporary space rarely exceeded one room for the recruiting personnel of the recruiting officer, naval medical officer, and six recruiters, and usually in the basement. In the case of Nashville one room was found in the Post Office Building which, however, was poorly located for recruiting. In Mobile a room was offered in a municipal building that had no tenants while reconstruction work was in progress. The recruiting sergeant performed the duties of a janitor, and painted the bare walls. He did without heat and light until the work had progressed to a point where the city took over. However, in this instance, the location was far superior to that of any federal or state building in Mobile. In Fort Worth a similar condition existed, and all through the recruiting service initiative and patience were required to meet discouraging conditions. Tactful use of the word "Emergency" to federal and state custodians proved helpful. The remedy for this factor, securing desirable rental free space, would be had if it were possible, on the outbreak of an emergency, if the recruiting officer could be backed up by the issuance of an executive order giving the armed services priority of occupancy.

Commercial Space

Let us assume, as so often it has happened, that the recruiting officer is forced to find commercial space. The procedure cannot be tersely stated, for it is a cumbersome one restricted not only by local conditions, by the fact that real estate owners are loath to lease for an indefinite time, but by the regulations and legal restrictions that must be scrupulously followed. Proposals must be had from not less than three parties, and potential lessees are impatient of government contract red tape. The lease must specify the floor space in square feet, not to exceed the Quartermaster's limitations in that respect. Light, heat, janitor service, elevator and toilet facilities, the number of windows and other details must be stated. If they are lacking in any respect the lease, if forwarded to Washington for approval, bounces back like the traditional rubber check. Some contractors list furniture, others omit. The recruiting officer must then secure authority to lease it locally, or submit a requisition and wait for its arrival by freight. Resourceful officers were remarkably successful in borrowing it. When a satisfactory bid is had it must be signed by a member of the bidding firm, or, if a partnership, by the secretary of the corporation, witnessed and sealed.

When this has been accomplished it must be forwarded to Division Headquarters for submission to the Quartermaster. It may be returned for technical changes to conform with law or regulation. When the changes are made the Division Headquarters rewrites it and returns it to the District for signature. Not infrequently the necessary signature cannot be had until an absent lessee returns from a business trip.

The acceptable bid, conforming to all requirements, then reaches the Quartermaster and other careful scrutiny is forwarded by him to the Procurement Division of the Treasury Department for final clearance. During this interlude the District must carry on, forgetful of alibis. In one extreme case, that of Little Rock, there was a lapse of three weeks before the technically correct lease was given clearance. That delay was not overcome speedily, and not until the end of the drive was Little Rock able to produce up to expectations. For a matter of weeks its force had

XUM

to carry on in wholly inadequate basement room space. In Nashville a similar case in certain ways operated to retard its productiveness. At first it operated in unsuitable federal location, buoyed up by the promise of excellent space in every respect by the custodian of a federal building. This promise went with the wind, and valuable time had been lost before suitable commercial space could be authorized and occupied. In the case of Raleigh, where suitable post office space was long delayed, the force carried on in one room in the basement, with boxes as the only furniture. Under those conditions the establishment of its two sub-stations had to wait, vet, at the end of the drive, the Raleigh District was up with the leaders.

The recruiting officer, betwixt the devil and the deep blue sea in his search for space, must not, however, make the mistake of accepting rental free space, except for a brief period, if the building is badly located. In that event he must turn to a well located commercial space, for the essence of recruiting is the procurement of recruits.

There is a possible remedy for the above cited delays in securing commercial space, with their lag of recruiting. The recruiting officer should be authorized, with full trust in his sagacity and honesty, to negotiate and conclude the lease for space without reference to higher authority. He is the man on the spot and in a position to know the prevailing local prices, the desirable location. If he should violate the confidence invested in him to close the deal at the best figures obtainable, he would be liable to proper discipline and penalties.

The total rental paid during the drive was $1,353.80 for thirty stations.

Supplies

Ranking closely with the factors of space and untrained recruiting personnel, the factor of delayed delivery of vitally needed supplies contributed materially to the comparatively slow recruit procurement in the early days of the drive. The emergency was an emergency, unexpected, and speed in delivery and the prior accumulation of reserve supplies must meet this retarding factor.

Forms to complete enlistments, recruiting literature of sorts that ranged from posters to form letters, mimeographs, furniture, medical supplies, were in instant demand in the newly established stations. From its small emergency stock the Publicity Bureau, on September 29, rushed its supplies, and soon was operating at peak capacity to augment publicity efforts. Certain blank forms, however, are printed by the Government Printing Office, and the recruiting service had to wait on priority of the jobs ordered by the Quartermaster from that busy branch of the government service.

It would be needless to enumerate the various types of paper supplies necessary to conduct a recruiting drive, for their name is legion. In the matter of all papers pertaining to actual enlistment, service record books, beneficiary slips, etc., it should be remembered that approximately eight thousand men were enlisted, and for each a complete set was required.

The initial emergency supply from the Publicity Bureau came from its inconsiderable stock on hand that did not require printing, and this supply went directly to the Districts. Work was then speeded on printing, and distributing, posters, letter heads, envelopes, form letters, and the many enlistment forms. This was so expedited that it was not long before all Districts were fully equipped. When the drive began only the Division Headquarters were equipped with a mimeograph or duplicating machine, items of vital need in an emergency to a District. Until supplied, with a liberal addition of typewriters, the new districts of the Southern Recruiting Division were thrown upon the charity of the Navy Recruiting Service, who freely offered the services of mimeograph machines and their supplies. Mimeograph supplies, had they been early available, would have made it possible to have the mimeograph work, which soon mounted to a considerable volume, done by commercial firms.

Two items in immediate demand, that were later forthcoming, were the reference books of the Ayer Newspaper Annual and the Official Postal Guide, the former for press releases and its valuable notes on the population and character of cities and rural areas; the second for proper addressing of the many postmaster forms.

Mistakes naturally were made at the inception of the drive. District Headquarters received muster and pay rolls and other forms pertinent only for Division Headquarters. Sub-stations received finger-print sets, health and service records, clothing records and many enlistment forms not required.

Improved wooden "A" signs proved universally unsuitable when shipped to supplement the lack of the steel signs with their sturdy construction and heavy bases. The light wooden signs lacked sufficient anchorage to stand up in the high winds of the winter months.

Another early lack was that of folders for correspondence and retained files. In their absence wire baskets were the filing system. Instructions were being issued so fast, and conditions changing so fast, that the lack of inadequate filing facilities was keenly felt.

To inaugurate and build up an efficient publicity campaign the early supply of literature and forms is imperative.

Recruiting Personnel

It was of course necessary to supplement the small recruiting personnel early in September from its enlisted Marine Corps strength of 81 men to its final strength of 350. The initial draft proved disappointing in its disturbing lack of clerical qualifications, for these are absolutely indispensable in fully 90 per cent of a recruiting force. This lack may be partly attributable to the definition of a recruiter's qualifications as laid down in the Marine Corps Manual. In it are listed the requirements of correctness of uniform, soldierly appearance, correct deportment.

The modern recruiter should have clerical qualifications that include typist ability and the writing of a clear hand, have not less than one enlistment, varied service that includes sea or foreign service, or both, and have had not less than one year of high school education as a minimum, in addition to those characteristics laid down in the Marine Corps Manual.

In establishing the new districts it was possible to transfer only one experienced recruiter to each, to serve as a first sergeant. All districts had men newly assigned, some palpably unsuited or not equipped for recruiting,

some who required intensive training before they could measure up to the recruiting standard. Early elimination, when their shortcomings had been cited to Washington, was followed by replacements of requisite ability, but the necessity for this training, and the lack of clerical men, had its retarding influence.

The old days, when recruiters spent their days on the street, interviewing potential recruits at the "A" signs, or haunting employment agencies in dubious localities, are gone. The stream-lined recruiting of today, with its vastly increased volume of paper work, calls loudly for clerical ability or a station will bog down under the barrage of paper work. Sub-stations require a sergeant whose personality and education fit him to make a favorable impression on the federal, county and city officials and newspapermen, and to interview applicants, for nearly eighty per cent of our recruits have had a minimum of a year in high school. Recruiting is a specialized task. Men not capable of absorbing it have no place in it.

District Headquarters is the logical place for training of recruiters. Here the wheels go around, and theories are translated into hard facts. Here they learn, by visits to the medical examining room, to judge the necessary physical standards, to weed out the palpably unfit applicant and not waste the medical examiner's time by sending him in. Here they come into daily contact with every detail of recruiting. It was strikingly noticeable in the closing months of the drive how a trained force went hand in hand with a mounting volume of enlistments.

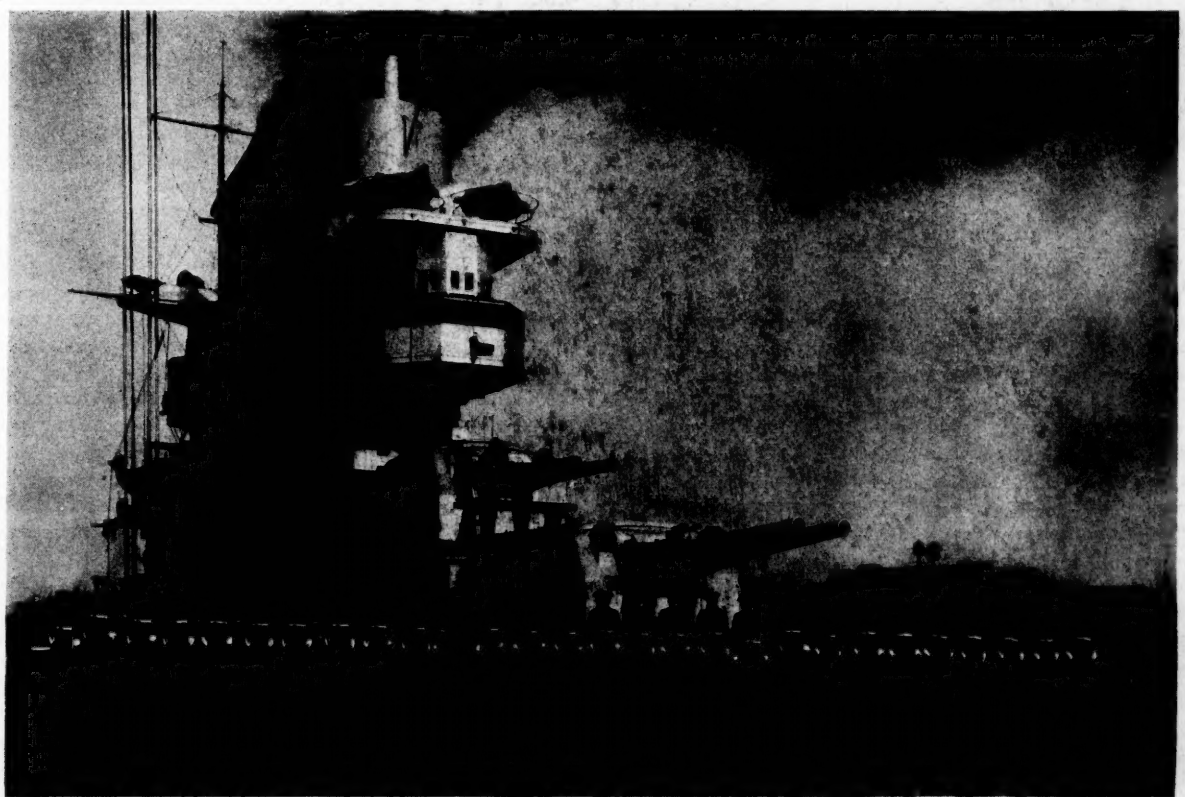
Sub-Stations

Every effort was made to establish at an early date the total of 81 sub-stations, whose locations had been wisely left to the judgment of the Divisions. While it might appear that their establishment should wait until the District is functioning smoothly, time is a vital element in a recruiting emergency. The District Officer must give it his personal attention, and exercise the utmost care in assigning the personnel for it which rarely exceeds one or two men. They must uphold the prestige of the Corps in virgin territory.

Again, as in the case of the District problem, he is first faced with the location of space, rental free if possible. In the total of 83 sub-stations, including the two that existed prior to the drive, it was necessary to take commercial space in twenty-five stations, and the comparative success in securing rental free space was due to the limited space required. On the other hand postmasters in the smaller cities are a friendly lot, and willingly assisted in advice as to where space could be had. And, when the sub-station was established with an experienced recruiter in charge, the District Headquarters could ill afford his detachment.

In the location certain factors must have serious advance

(*Continued on page* 49)



The broad decks of the U.S.S. "Saratoga," one of Uncle Sam's huge airplane carriers, offer sufficient space for airplanes to "take off" or land, and also furnish ample room for the U. S. Marine Detachment to engage in drills and other exercises.

XUM

Notes on the M1 Rifle

By Captain J. H. Berry
U. S. Marine Corps, Staff, Basic School

SEVERAL articles have appeared in the Gazette concerning small arms in use in the Marine Corps or which might become available for test and adoption by the Marine Corps. Most of these articles have been written by those whose names are familiar to all of us because of their close association with rifle marksmanship or rifle manufacture. It may seem, then, a bit presumptuous for one who has not been identified with the rifle or whose name has not appeared in these pages, to come forth with ideas about rifle marksmanship. Such is not the intention. It is desired to present here a few notes on the Garand Semi-Automatic Rifle that are the results of the limited experience of the writer during the past summer in endeavoring to put across the subject of rifle marksmanship with that rifle to several of the student officers of the Basic School, Class of 1939-40.

The history of the small arms that the corps has used, from the time that the recruit brought his own "fowling piece" with him upon enlistment to the present day when he is issued a rifle, has closely followed that of the United States Army. The resources of the Army have permitted a great deal of experimentation in the development and manufacture of the rifle that is beyond the scope of the Marine Corps, primarily from a financial standpoint. Our adoption of the standard arm of the Army perhaps may have been a following of the line of least resistance, yet it is a fact and one that we must face, regardless of the terminology employed in designating such a course. Whether we desire it or not our weapons of the future will be those of the Army. It behooves us, therefore, to take what is available to us and to make the best use of it that we possibly can under the circumstances. As early as 1933 an article appeared[1] dealing with the forerunner of the present rifle. This rifle was of .276 caliber and was not suitable in an organization whose standard small arms caliber was .30 inch. Subsequent developments of this rifle in .30 caliber lead to the Garand Semi-Automatic Rifle which we now have, known as the M1 rifle. This rifle has now been adopted by the United States Army as its standard small arm.

At the present rate that the M1 rifle is being manufactured by Springfield Armory and by civilian firms there will soon be sufficient rifles available for issue to units of the Army in such number that we can expect future matches at Camp Perry to be shot with this rifle. The matches scheduled for the summer of 1940 will have the following four matches open to the M1 rifle:

(a) Camp Perry Instructors (surprise fire match) 200 yards, standing.

(b) Rapid Fire Match, 200 yards, standing to sitting, 16 rounds, time limit—1 minute.

(c) Rapid Fire Match, 300 yards, standing to prone, 16 rounds, time limit—1 minute, 10 seconds.

(d) Ten-man team, slow fire match at 600 yards, 8 rounds per man.

This should be sufficient warning to us of the Marine Corps to get busy and do something with the rifle, lest the Army lower the boom and find us with our suspenders off our shoulders.

Those officers of the Corps who were detailed to instruction at The Infantry School, Fort Benning, Georgia, during the school year 1935-36, and following, have received instruction in the M1 rifle. Other officers of the Corps have either obtained instruction or have given themselves self-instruction on the weapon. This number, however, is small and the amount that is known about the rifle in the Marine Corps is meager.

There are those who will argue that a rifle is a rifle and if you can shoot one you can shoot them all. This contention, unfortunately, has not been borne out in a uniform production of results. Weapons, like women, have individual peculiarities which must be learned by close association.

During the summer of 1939 there became available to certain units of the Marine Corps a limited number of M1 rifles for the purpose of instruction and tests. Results were not uniform in all localities and the rifle was "damned" for several reasons, the principal ones being that the rifle was not "accurate" and was "not suitable for field use."

In an effort to present to the readers of the Gazette some of the experiences of the writer in the instruction of crtain student officers of the Basic School, these notes have been prepared; hoping thereby to give an idea of the method of training employed, the capability of the rifle, the comparative "accuracy" of the rifle and some indication of its "suitability for field use."

The 1939-40 course of the Basic School was the first year in which instruction with the M1 was given. That being the first time that the weapon became available to the school in sufficient numbers to permit giving individual instruction.

There being thirty rifles available,[2] it was decided to detail that number of the new students for instruction. It was desired that these students be instructed in one group, by one instructor, and carried through to the completion of the range practice. Unfortunately this was not possible of execution due to factors beyond the control of the school.

The plans for the school year called for a student body in the neighborhood of one hundred and fifty officers. Con-

[1]The Infantry School Mailing List, Volume VIII.

[2]Staff indoctrination accounts for the remaining five assigned to the Basic School.

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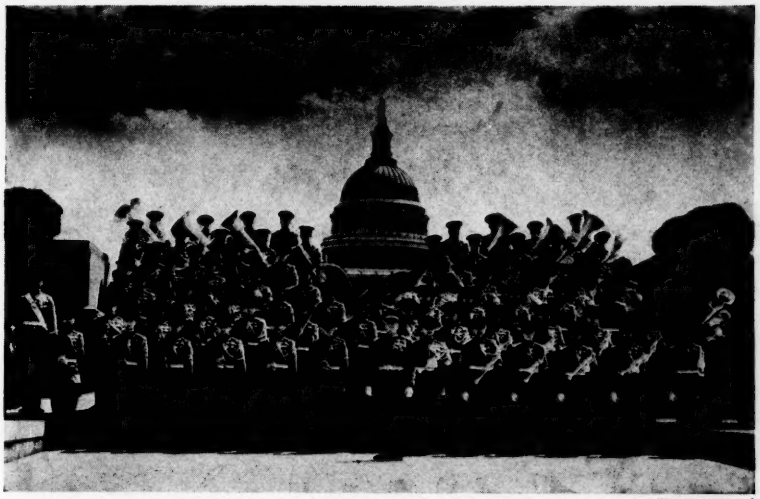


The Leatherneck

Band as it appears today.

CAPTAIN TAYLOR BRANSON RETIRES

Captain Branson was born in Washington in 1881 and was educated in the public schools of this city. He enlisted in the band in 1898, just before the close of the Spanish-American War. He progressed through the various stages of the band until June 1st, 1921, when he was appointed Second Leader of the Band. On May 1st, 1927, he succeeded to the Leadership of the Band, holding this position until his retirement April 1st, 1940.

Captain Branson began his musical career with a study of the violin when he was just a boy, under William H. Santelmann, father of the present Second Leader, who was then a member of the band. He later continued his study of that instrument with Herman Rakeman. He studied clarinet with Andrea Coda, solo clarinetist with the Marine Band when Louis Schneider was the Bandmaster; and composition with Arthur Tregina, former Principal Musician in the Band.

When radio broadcasting was in its infancy, Captain Branson became identified to radio fans throughout the country as the Leader of the first large instrumental group that ever broadcasted, sending its programs out over the air from the Naval Air Station at Anacostia, D. C. Through his 40-odd years of service with the band, Captain Branson has made many extensive concert tours which have carried him into every state in the Union. He has also taken the band on numerous trips to expositions in various parts of the country. These would include the "Chicago World's Fair," the "Eastern States Exposition," the "Norse Exposition at Minneapolis," and to the "Central Canada Exhibition" at Ottawa when the Marine Band officially left the boundaries of the United States for the first time in its history.

Captain Branson has been a member and Musical Director of the famous Gridiron Club and also of the famous Military Order of the Carabao, an organization composed of officers who have served in the Philippines.

Captain Taylor Branson

The Leatherneck

February 1, 1940.

My dear Captain Branson:

It has come to my attention that you are today being ordered home to await retirement on April 1, 1940, for physical disability incident to over forty years' service in the Marine Corps.

I wish to take this opportunity to express to you my deep appreciation of the service you have rendered as Leader of the Marine Band, many details of which were closely connected with White House functions, the rendition of honors to important visiting personages, and numerous other allied ceremonies. Your cheerful, efficient and most cooperative efforts have inspired the most favorable comment at every hand, and I desire to add my personal thanks at this time to those of so many others.

I am certain that the members of the Marine Band will miss your able leadership as much as your absence from White House events will be noted here, and may I say to you that you have my every wish for many years of life and happiness.

Very sincerely yours,

FRANKLIN D. ROOSEVELT.

XUM

Reserve Affairs

By Colonel Joseph C. Fegan, U.S.M.C.
The Director, Marine Corps Reserve

CONTINUING my report of the affairs of our Reserve, the following items of interest can be recorded as having transpired since the March, 1940, issue of The Gazette.

Recommendations made by the Marine Corps Reserve Policy Board are as follows:

1. Attention is invited to the fact that the Marine Corps Reserve is far short of the strength and equipment required to fulfil its mission, and in view of the international situation it is recommended that steps be taken to secure appropriations necessary for procurement and training within the purpose and intent of the Naval Reserve Act of 1938.

2. That the existing laws be amended to permit members of the Marine Corps Reserve to receive the same benefits now authorized by law for members of the regular Marine Corps in the event of injury or death while performing active military or naval service, and that members of the Marine Corps Reserve shall be considered as performing active military or naval service while performing active duty with or without pay, training duty with or without pay, drills, equivalent instruction or duty, appropriate duty, or other prescribed duty, or while performing authorized travel to or from such duties.

3. That a comprehensive program for procurement of permanent armories be undertaken, to the end that units of the Naval Reserve and Marine Corps Reserve be adequately housed.

4. That the Marine Corps Reserve be authorized to perform drills with pay on Sundays. Such authorization will permit training otherwise impracticable because of joint use of facilities and equipment and availability of certain personnel.

5. That further study be made of the Naval Reserve medical personnel distribution, with a view to providing the Marine Corps Reserve activities with necessary personnel. This recommendation has been found necessary due to the unavailability of Naval Reserve medical personnel in certain geographical locations.

6. That the law be amended to provide that chief warrant officers of the Marine Corps Reserve shall receive the same pay and allowances as chief warrant officers of the regular Marine Corps.

7. That Naval Reserve medical personnel on duty with the Marine Corps Reserve be awarded the Marine Corps Reserve Service Medal under the same requirements as prescribed for members of the Marine Corps Reserve.

8. That existing laws be amended to the end that officers of the Marine Corps Reserve shall take precedence among themselves and among officers of the regular Marine Corps in their respective ranks or grades according to the dates and numbers of their commissions.

These recommendations are now in the Secretary's Office and will be acted upon shortly.

The recommendations made by the Policy Board to the Major General Commandant, — a total of twenty-four — are being worked out as fast as administrative time will permit with a view of keeping our usual standard of admission to commissioned ranks as well as enlisted grades of our Reserve. Orders will show that an unusually large number of our Volunteer Reserve officers have been ordered to active training duty during the past three months. Orders will further show that battalion commanders have had the privilege of nominating certain officers of their battalions for additional and personal active duty prior to the battalion field training period.

A further study of each commissioned officer's personal record is being made with a view of placing in the "Special Courses & Qualifications" column of the "Register and Directory of the Commissioned and Warrant Officers of the U. S. Marine Corps Reserve" a tabulation of the number of training camps and other credits which heretofore have not been shown under this column. In the same column will be recorded a list of officers who have been issued the Marine Corps Reserve Service Medal. There is compiled herewith a list showing the running mates for field officers of both the Organized and the Volunteer Marine Corps Reserve.

Prepared on 15 May, 1940, and Based on Navy Register of 1 July, 1938, the Latter Being the Effective Date of the Present Reserve Act

	Date of Rank	*Running Mate*
Colonels		
FAY, William G.	17 Oct. 34 No. 1	P. H. Torrey—1 Nov. 34
MAAS, Melvin J.	28 Apr. 38 2(A)	S. B. Kennedy—1 May 38
Lieut. Colonels		
MORRISON, Victor I.	17 Oct. 34 No. 1	L. L. Leech—25 Nov. 34
WALLER, Littleton W. T.	17 Oct. 34 2	L. L. Leech—25 Nov. 34
MILLER, Harvey L.	1 July 35 1	C. B. Cates—1 July 35
KRULEWITCH, Melvin L.	1 July 35 3	C. B. Cates—1 July 35
WATTERS, Alfred A.	1 July 35 4	C. B. Cates—1 July 35
THOMPSON, Clark W.	10 July 35 1	F. Whitehead—27 July 35
MACKLIN, John D.	1 Jan. 40 1	L. H. Brown—1 Jan. 40
*HILL, Carlton	1 Jan. 40 2	L. H. Brown—1 Jan. 40

FORDNEY, Chester L.	1	Jan.	40	3	L. H. Brown—1 Jan. 40
*WINDER, Donald T.	1	Jan.	40	4	L. H. Brown—1 Jan. 40
STICKNEY, Iven C.	1	Jan.	40	5	L. H. Brown—1 Jan. 40
*BARRON, Bernard S.	1	Jan.	40	6	L. H. Brown—1 Jan. 40
McCLELLAN, Stephan A.	1	Jan.	40	7(A)	L. H. Brown—1 Jan. 40
*PETERS, Chester J.	1	Jan.	40	8(A)	L. H. Brown—1 Jan. 40
Majors					
SCHIESSWOHL, Ralph L.	8	Jan.	26		†S. Ladd—29 May 34
WOOD, James	12	Nov.	29		S. Ladd—29 May 34
STACK, Vincent E.	8	July	31		S. Ladd—29 May 34
FLYNN, John J.	23	Sept.	32		S. Ladd—29 May 34
BOCK, Frederick M., Jr.	23	Sept.	32		S. Ladd—29 May 34
GRAFTON, Harry C., Jr.	10	Nov.	32		S. Ladd—29 May 34
BETTEX, George W.	10	Nov.	32		S. Ladd—29 May 34
PARKER, Chauncey G., Jr.	2	Mar.	33		S. Ladd—29 May 34
MULLIGAN, John J.	2	Mar.	33		S. Ladd—29 May 34
MALLEN, Frank A.	29	Mar.	33		S. Ladd—29 May 34
HERTERICH, Charles L.	8	June	33		S. Ladd—29 May 34
ROSENTHAL, Louis S.	5	Oct.	33		S. Ladd—29 May 34
BRADLEY, Charles C.	15	Nov.	33		S. Ladd—29 May 34
WILLIAMS, Alford J., Jr.	24	Apr.	35	(A)	J. B. Wilson—1 May 35
FAY, Bertrand T.	10	July	35		B. G. Jones—27 July 35 Ret. P.O.
TURIN, Francis E.	10	July	35		B. G. Jones—27 July 35
PENN, Carleton	10	July	35		B. G. Jones—27 July 35
BIERMAN, Bernard W.	1	Sept.	35		F. O. Rogers—1 Sept. 35
VAN DYKE, W. S., II	11	Sept.	35		W. G. Farrell—1 Oct. 35
DAY, Karl S.	7	Nov.	35	(A)	F. E. Stack—1 Dec. 35
PARKER, Alton N.	1	Apr.	36	(A)	L. A. Dessez—29 May 36
SIMMONDS, Edward P.	22	May	36	No. 1	L. A. Dessez—29 May 36
MYERS, Frank C.	22	May	36	2	L. A. Dessez—29 May 36
GOLDING, George E.	22	May	36	3	L. A. Dessez—29 May 36
DINELEY, Richard L.	22	May	36	4	L. A. Dessez—29 May 36
FOOTE, Baldwin W.	22	May	36	5	L. A. Dessez—29 May 36
BALDWIN, Clarence H.	22	May	36	6	L. A. Dessez—29 May 36
KELLER, Harold M.	22	May	36	7	L. A. Dessez—29 May 36
LESSING, Otto	22	May	36	8	L. A. Dessez—29 May 36
KNOWLAN, Joseph R.	22	May	36	9	L. A. Dessez—29 May 36
DOYLE, Edward F.	22	May	36	10	L. A. Dessez—29 May 36
SULLIVAN, Paul	22	May	36	11	L. A. Dessez—29 May 36
DOLAN, John J.	22	May	36	12	L. A. Dessez—29 May 36
CAREY, William P.	22	May	36	13	L. A. Dessez—29 May 36
GERACI, Francis R.	22	May	36	14	L. A. Dessez—29 May 36
WOODWORTH, Wethered	1	July	36	1	R. H. Schubert—1 July 36
HOPKINS, Frederick W.	1	July	36	2	R. H. Schubert—1 July 36
SELLERS, James M.	20	Nov.	36		S. W. Freeny—1 Dec. 36
MILNE, Caleb J., III	24	Feb.	37		A. W. Paul—1 Mar. 37
SMITH, Bernard L.	5	Apr.	37	(A)	W. F. Brown—22 Apr. 37
BURNETT, Chauncey V.	4	June	37		C. W. Martyr—30 June 37
CONROY, Raymond W.	29	June	38	(A)	R. R. Deese—29 June 38
BARKLEY, Newton B.	9	Nov.	38		H. R. Huff—1 Dec. 38
FOX, William J.	27	Dec.	38	(A)	W. W. Orr—1 Jan. 39
WALTER, Will H.	20	Jan.	39		W. W. Paca—1 Feb. 39
WASHBURN, Slater	17	Feb.	39		J. E. Curry—1 Apr. 39
BARR, Walter W.	20	Feb.	39		J. E. Curry—1 Apr. 39
STEVENS, Frederick A.	6	June	39	No. 1	C. T. Bailey—1 July 39
STICKNEY, William	6	June	39	2 (temp.)	No Running Mate
HANKINS, Joseph F.	1	Aug.	39		J. D. Muncie—1 Aug. 39
PARTRIDGE, Edwin D.	21	Aug.	39	(temp.)	No Running Mate
HAGERMAN, Burdette	30	Aug.	39	(temp.)	No Running Mate
CROWLEY, Joseph T.	11	Sept.	39	(temp.)	No Running Mate
BARNES, Walter J.	17	Oct.	39	No. 17	H. L. Litzenberg—1 Nov. 39

XUM

Majors (cont'd)	*Date of Rank*		*Running Mate*
CARD, Horace W.	17 Oct. 39	25	H. L. Litzenberg—1 Nov. 39
MARSHALL, Wyman F.	17 Oct. 39	34	H. L. Litzenberg—1 Nov. 39
KESSENICH, Mark F.	17 Oct. 39	36	H. L. Litzenberg—1 Nov. 39
HOUCK, Howard W.	17 Oct. 39	38	H. L. Litzenberg—1 Nov. 39
RINGWOOD, Thomas E.	17 Oct. 39	41	H. L. Litzenberg—1 Nov. 39
HANSON, Eugene B.	26 Oct. 39		H. L. Litzenberg—1 Nov. 39
CHALFANT, William, III	25 Apr. 40	(temp.)	

NOTE: *Selected, but not yet promoted.
†Senior Major shown in 1938 Register who had not been passed over for selection.
(A) Aviator

The composition of a standard battalion is being studied by this Headquarters, and after the Director has made his summer inspection trips he will be in a better position to take a stand on this question. Battalion commanders are invited to express their opinions and ideas in this matter. Letters addressed to the Director on this topic will be welcome.

The problem of additional medical personnel for Organized battalions has been taken up with the Bureau of Medicine & Surgery and an increase in medical personnel for the battalions can be expected shortly.

Every effort is being made to order volunteer Reserve Officers, principally those who are graduates of our Platoon Leaders' Classes, to active duty.

Beginning in June, the Reserve Bulletin will be published monthly. It will carry such items as we feel will be of interest to all hands concerned and will be more of a news bulletin than heretofore. Effort will be made later in the year to have the "Register and Directory of Commissioned and Warrant Officers of the U. S. Marine Corps Reserve" printed instead of mimeographed as was done during the past two years.

During the summer training periods this year it is hoped that Battalion Commanders will make every effort to organize soft-ball teams and other forms of athletics to be participated in after routine working hours.

Steps are being taken to organize a Reserve battalion with Headquarters at Charlotte, North Carolina. The Major General Commandant has directed that all battalion stores, or the equivalent of same, and all amusement funds or battalion funds, be abolished. This amounts to the abolition of all semi-official funds that may be in existence in the different organizations. It appears that this action was necessary in view of certain discrepancies and reports that have been made against such stores or enterprises of this character at certain places throughout the Reserve.

As usual we will be represented at Camp Perry by a Reserve Rifle Team. Major Joseph F. Hankins, U.S.M.C.R., will be the commanding Officer of the Rifle Team Detachment and will also act as Team Captain. The matches this year to be fired at Camp Perry will be held on 18 August - 7 September. Every effort is being made to make our usual good showing. All eliminations from the squad will be made at Wakefield, Mass., prior to leaving for Camp Perry and unsuccessful candidates will be returned to their respective organizations from Wakefield.

The Office of Coordinator of Reserve Activities New York Area will be abolished on 30 June, 1940. The Office of Assistant to the District Commander, 9th Reserve District, Great Lakes, Ill., and 1st Reserve District, Boston, Mass., are to be likewise abolished. The Commanding General, Department of the Pacific will have one Reserve officer detailed to handle certain Reserve matters for the Department of the Pacific. Two Reserve officers have been selected for assignment at Headquarters Marine Corps to assist in the handling of administrative matters in the office of the Director.

The Reserve Service Medal is being issued for presentation as rapidly as the service qualifications of the individuals concerned can be checked. Distribution of the service blankets is being made as expeditiously by the Depot of Supplies as business will permit and should be distributed by 30 June. It is directed that every effort be made to maintain strict accountability of these blankets.

The MGC has directed that in the future our battalions are to be trained at Quantico, San Diego, or Parris Island. The first change that policy has created is noted in the fact that the 5th Battalion will go to Quantico for training instead of Camp Ritchie, Md., as previously scheduled.

It is the intention in the coming fiscal year to establish an artillery battalion at Los Angeles and a new infantry battalion at Portland, Oregon, in addition to the one previously mentioned at Charlotte, North Carolina. In addition to the above it is anticipated that shortly there will be one and possibly two other battalions established, the locations for which have not been fixed.

For this year and in the absence of instructions to the contrary, recruiting for battalions up to 30 days prior to departure for camp has been authorized, provided such recruiting does not exceed 10 percent of the authorized enlisted strength of the command.

The Reserve Officers Training School for lieutenants under 30 years of age was opened at the M C S, Quantico, Va., October 1, 1939, another such Class was organized on 1 April, 1940, and still another will be held beginning on or about 12 August, 1940. The period of active duty to attend this Class will be for three months or longer.

The policy board raised the question as to whether or not the wearing of uniform would be required when performing appropriate or equivalent instruction or duty. In the absence of instructions to the contrary this will be left to the discretion of the battalion commander concerned.

In the September issue of THE GAZETTE there will be a report on the affairs of our Reserve which will carry certain remarks as the result of the Director's inspection of the various summer camps.

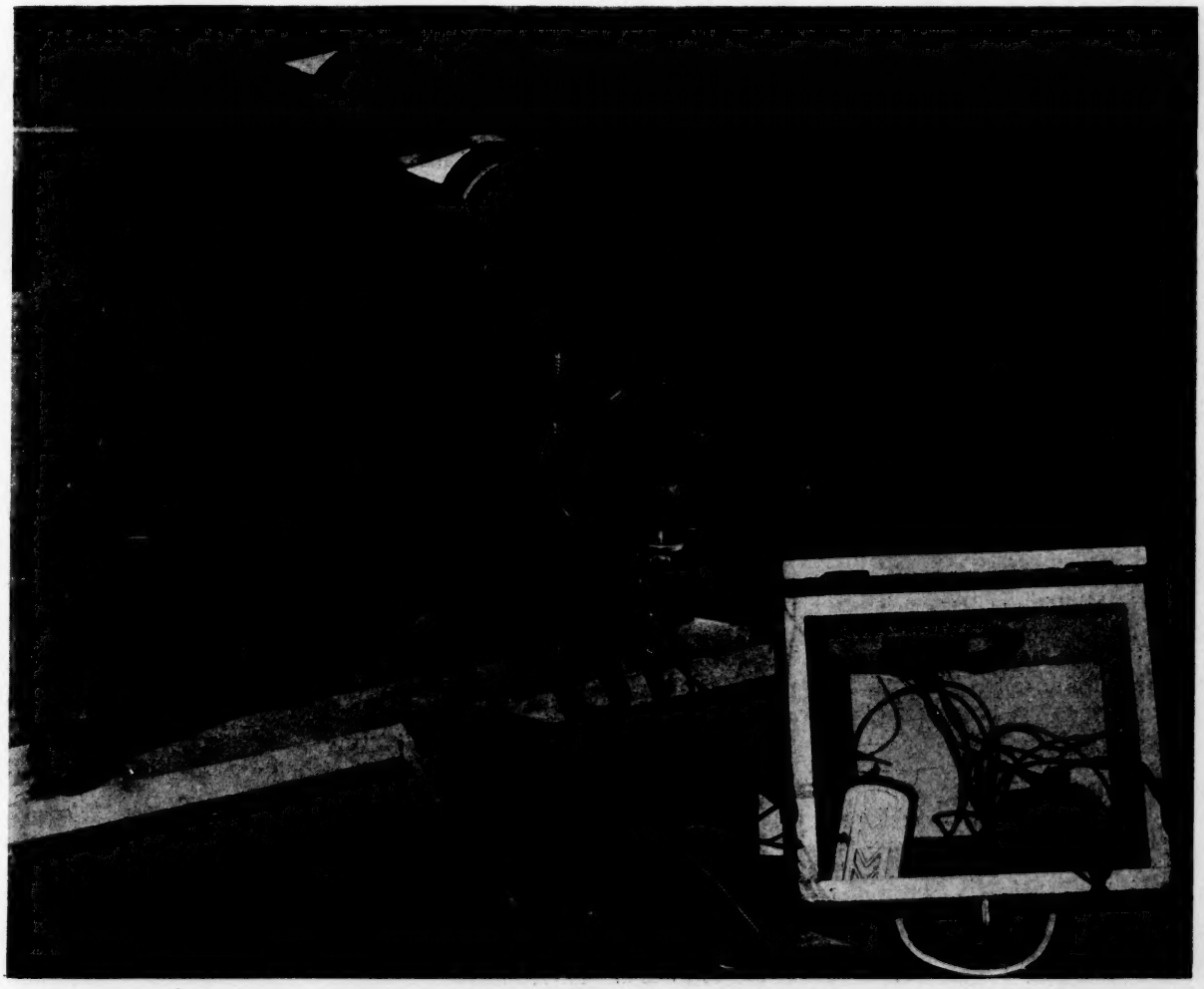
Machine Gun Practice for Small Commands

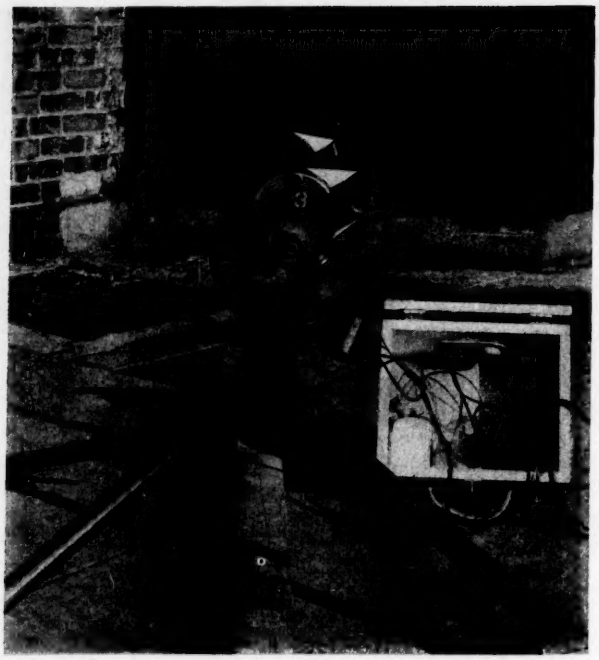
CAPTAIN W. I. PHIPPS, U.S.M.C.

THE Marine Barracks at the New York Navy Yard has been designated to have available a machine gun company for mobilization. The personnel of this post contains a few excellent machine gunners from the FMF and 4th Marines, one very fine ex-army machine gunner, several men who have some knowledge of machine gun work, and a large number of men who know little or nothing about the workings of the BMG. With this nucleus of a few excellent gunners it was endeavored to train a machine gun company.

The Academic part was sandwiched in between the work in MCO No. 146, and on the whole worked very well, giving the men a fair working knowledge of the "book larnin'" necessary to a machine gunner. Army training films were secured from Governors Island and these were a great help in showing the proper proceedure. Actual practice, however, was another thing. There is no open space in this navy yard for elementary and advanced gun drill, nor is there one near by, at least not any closer than some of the army forts and these are too far away to take the troops. The men are doing day on and day off guard duty. So our practice in this was confined mostly to lectures, with occasionally a little practice in some side street in the yard—one movement, then dodge a truck.

Practice in manipulation was a question. The First Sergeant brought forth an idea which he had first seen used in Peiping and which seemed very good. This idea





was to secure a telescope to the water jacket of the gun, and on the rear of the telescope insert a small light bulb, taping it to insure solidity. The bulb was to be connected to a switch at the trigger so that when the trigger was pulled the light would shine through the telescope. The considerable ingenuity and mechanical skill necessary to make up this apparatus was furnished by the maintenance outfit. The pictures which accompany this article show better than words the set-up of the gun. Picture No. 1 shows a close-up of the breech with the trigger switch, to which a bell or buzzer is also connected. A transformer or batteries will furnish the electricity. We used a transformer and this is probably more satisfactory. The eye-piece and the first lens of the telescope must be taken out. This will not damage the telescope in any way. By adjustment of the telescope a thin vertical line of light can be projected on the target 1000 inches away. It will be necessary at first to do considerable adjustment until the proper amount of light is projected. After the first adjustment a mark on the telescope will make future adjustment easy. It should be adjusted so that it throws a vertical beam three inches high at 1000 inches. This is the length of the machine gun burst at that distance and aids in familiarizing the men with characteristics of fire. In our case we fixed two guns with these telescopes so as to expedite the training. Two different tones of buzzers were used in order that the men firing would not get confused.

This battery of guns was used four days a week for manipulation practice. In addition another gun was set up without the telescope for practice in turning the elevating and traversing hand wheels. This practice—extended over a period of three and a half months—developed quite a few men who were quite good in manipulation.

The test of all this practice, of course, was to come in the actual shooting. This was another problem. There was no range or even 1000 inch course available outside of the distant army posts. Paragraph 78 of Volume III, Part III, Basic Field Manual gave us an idea. We did have an indoor range and a .22 calibre machine gun. A request was made to Washington that we be allowed to fire the .22 for qualification according to this paragraph. This was the first time such a request had been made, but Headquarters agreed that it was all right and gave us permission and an allowance of ammunition. Since the army course consisted of once over the 1000 inch course, and Marine Corps Order No. 91 said the course was to be fired twice, Headquarters compromised between the two and had us fire the course twice, and doubled the army score. This made Expert Gunner 368, First Class 356 and Second Class 280 out of a possible 400. One look at the score of 368 and a general shudder was registered. We certainly did not expect any experts and were doubtful if we would even get a first class. The results proved, however, that this was about the proper score. By plenty of practice a man can become Second Class Gunner the first year. Only in exceptional cases, however, is he able to get into the higher brackets. This is as it should be.

Firing was begun about March 25, 1940, and the last shot for record was on 14 May. Admittedly this is slow, but these men are doing day on and day off guard duty. We didn't push them too much. The final record showed that we had 6 Expert Gunners, 2 First Class Gunners, 69 Second Class Gunners and 33 Unqualified. Our percentage of qualification was 77. The average score for the command was 291.5, which we didn't consider too low in view of the difficulties. High score was 379, a really fine score in any league. It was made by Private LeBlanc, who had enlisted 11 March, 1940, after spending three years in an army machine gun company. Score one for army training. All the experts with one exception were men who had spent some time in machine gun companies. This exception was Lieutenant Lhamon, who joined from Basic School. His score of 368 speaks well for the training given in Basic School. The two first class gunners were formerly of the FMF. A good many of the second class gunners, though not all, were firing for the first time. Some of the unqualified had hard luck, but the most of them hadn't applied themselves with enough diligence to the training. Every outfit has some of these. One incentive we used was that any man suposed to fire for record, and who did not qualify, would not be considered on the next promotion list.

We fired 110 for qualification—3 officers and 107 men. Ammunition expended was 67,100 rounds; targets used, 440. One machine gun took care of all the firing, and just lasted and that was all. The gun had to be surveyed after the firing. It is not permanently damaged, however, just needing general repairs. It is recommended that two guns be furnished for the next firing. The .22 machine gun is temperamental, and requires a lot of care. We were fortunate in having two men who were well acquainted with its eccentricities, but at best the guns are none to good. There are constant stoppages, and great care must be exercised to get the time correct for record fire.

CARDED

Defense of Airdromes and Landing Fields

By Major W. C. Purple, U.S.M.C.

IN THESE days of "blitzkriegs" more attention should be given to the defense of airdromes and landing fields. One of the first objectives of every "blitzkrieg" is airdromes, the planes and the facilities thereat. In these days of undeclared wars and unexpected invasions it is too late to consider the defense of airdromes after the airdrome has been occupied or destroyed. If the hostile force does not intend to use the airdrome in its future operations and the destruction of the planes on the ground and the airdrome facilities best serve his purpose then some bright sunshiny morning our friendly neighbor will commit the unfriendly act of bombing our airdromes. It would certainly be an AA gunner's dream to be at his post when squadrons of hostile planes came down to make a surprise landing; but strange to say it has never happened that way.

The methods of protecting airdromes in common use are camouflaging existing ones, constructing dummy ones nearby, the use of AA Guns and interceptor planes. But of what use were these methods in Poland after their airdromes, with planes, had been destroyed, and what method could the Norwegians use at OSLO to protect their landing field after it had been occupied by hostile planes. Additional methods of protecting airdromes and landing fields which would be of particular use against unexpected unfriendly visits of friendly neighbors should be considered. Some of these would be the use of smoke, demolitions and/or obstacles.

All fields should be equipped with a mechanical means of producing a heavy continuous smoke screen not only over the airfield proper but over a large irregular area surrounding the field. This smoke screen would be useful

German 10.5-cm. gun firing in Poland.

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International News Photo

AFTER "BLITZKRIEG" STRUCK
A woman flees with all the possessions she can salvage from the ruins of Krzemieniec, Poland.

International News Photo

THE FLAME PRECEDED THE SWORD
A Polish village fire brigade making a valiant but futile effort to quench the blaze from German incendiary bombs.

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either for defense against bombing operations or to prevent the landing of hostile planes, making it impossible for the pilot to see where to land, to see local obstacles, and on the ground proper.

Landing fields could be protected from surprise landings by being mined. These mines to be controlled mines for the purpose of destroying hostile planes on landing.

The use of obstacles on the landing field would of course be to prevent surprise landings. The obstacles might well be divided into two types: (1) the protruding type, (2) inundations or pits. The protruding type could be steel posts countersunk in the ground so that normally the top of the post is flush with the ground. These posts could be so placed and of sufficient strength that when raised they would make landing an impossibility. The pit type could be a system of ditches of sufficient width and depth that the landing field would be useless at such times as the pits were opened. Sliding or revolving plates, mechanically controlled from Control Stations, could be used to cover and uncover the pits as desired. Control of these obstacles (posts or plates) could be by some simple mechanical device run by hydraulic, pneumatic or electric power. Control Stations would be concealed and located in the immediate vicinity of or/and at a place some distance from the field. The same considerations apply to Control Stations for controlling mines and smoke screens.

These methods of defense against "blitzkreig" operations have the following distinct advantages:

(1) They are simple to install and simple to operate.

(2) They are in existence and ready for use on "D"-Day.

(3) They can be put in use at an instant's notice.

(4) They can be effectively operated by a few men.

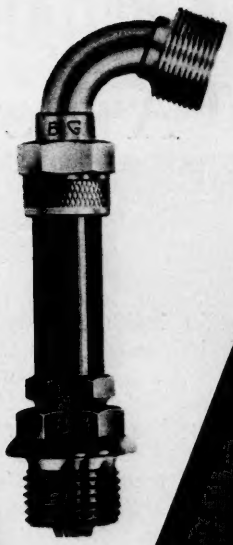
(5) They can be put in operation even after a "blitzkreig" has arrived with the result that the "blitzkreig" would be arrested temporarily and the necessary time gained to take steps to prevent it from being completed.

One or more of the above methods of defense should be installed on every existing airfield, and one or more of these methods of defense should be included as an integral part of any new airfield constructed. Naturally, the more important the field the more elaborate should be the steps taken to defend it. Even in field operations some form of defense against "blitzkrieg" operations should be employed at all airfields. Anticipatory plans should be made to have sufficient mines and smoke available for such use.

Remember, if steps such as these are to be taken to prevent a "blitzkreig" from being successful, installations must be made before the "blitzkreig." Remember Poland. Remember Norway.

NOTE: The above article expresses the individual opinions of the writer and shall not be construed as reflecting the opinions or views of the Navy Department or the service at large.

The use of the words "airdrome" and "landing fields" was used indiscriminately and sometimes interchangeably for the purpose of avoiding undue repetitions.



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A New Tropical Uniform

By 2nd Lt. James L. Denig, U.S.M.C.R.(V)

THE comfort, health, and efficiency of any body of troops is intimately related to the uniforms which the men wear. In the recent dispatch of British troops to Norway it was emphasized by the authorities that these men were equipped with the proper clothing for the wintry climate to which they were going. In the other extreme there have been photographs of British troops in Egypt wearing sun helmets, shorts, and other articles of clothing best suited to such a climate. Thus, in these two examples, we can see that foreign military establishments have given considerable attention to the question of proper clothing for various military situations.

American troops have been in the past and are at the present time incorrectly clothed for the types of climates in which they serve. But one historical example is necessary to bring to mind this condition. When United States troops landed in Cuba in 1898 they were properly clothed —to serve in colder northern climes. Their heavy blue uniforms were entirely wrong from every point of view for men who were fighting in the sweltering heat of Cuba.

A similar condition threatens us today as the United States turns its attention toward the Pacific and towards the tropical areas of the West Indies. Before more men are sent to serve in areas similar to Hawaii, it would be wise to investigate climatic conditions and to plan suitable clothing for such climates.

The first requisite of a sensible tropical uniform is a sun helmet. Though long in use by Marines, the felt campaign hat is hot and uncomfortable. It does not afford complete protection for the back of the neck where it is most needed. It fits the head snugly and so does not allow for the circulation of air within the crown. A sun helmet, on the other hand, answers these requirements and should be adopted as standard equipment for men on duty in the tropics. It covers the back of the neck and at the same time, by means of a special inner band, stands out from the head to allow the free circulation of cooling air. A suitable helmet is available in the United States at a lower cost than the campaign hat. Critics say that the helmet falls off when the wearer is in motion. The chin strap is placed on the helmet obviously to meet such a contingency. Others say that those worn by British troops in tropical service are thick and strong, designed to ward off any blows from falling or thrown rocks. The helmet proposed for Marines will crush in at the slightest pressure and thus affords no protection. This may be true, but it is not expected that falling rocks will be encountered where Marines will normally serve. Besides, the campaign hat can hardly be considered rock-proof. A sun helmet is the only sensible headgear in the tropics and would be a godsend to the Marines who must stand in the hot sun for hours on end.

The next alteration of the uniform in the interest of comfort is the changing of the shirt. The collar built for the necktie should be eliminated, at least on those shirts to be used on straight garrison duty and on landing parties. When ship's detachments come ashore in the tropics they usually drill without ties. The collar is unbuttoned and does not present a particularly neat appearance. Landing parties do not wear neckties or, if they do, they are quickly dispensed with when the men get ashore. Therefore the removal of the constricting collar from the old khaki shirt would seem advisable. To remain slaves to antiquated fashion is foolish. Eliminate the tie and eliminate discomfort. To the man setting up a machine gun, a tie serves no other purpose than to get in the way. A turn-down sports collar not requiring a tie would be the most comfortable solution of the problem. Such a style is in use in the British army and has been for quite some time.

The shirt can be further modified by cutting off half of the sleeve to the elbow. In the tropics where the temperature may reach 90 or 95 degrees nothing is more annoying than a binding cuff which cuts off the circulation of air to the rest of the arm. The net result is usually that the men unbutton their cuffs and roll up their sleeves. Why not recognize a true situation and meet it in a sensible way? Amputate the sleeve at the elbow. Killjoys will say that leaving the lower arm uncovered will subject the man to sunburn. If a tan is acquired gradually it will not burn. And after the initial tan is acquired, then there is nothing more to fear. Uncovered arms are not a danger. They would be a relief to those who must stand the watches in the often stifling heat of the tropics. It might be pointed out that this idea has, as have the preceding ones, been adopted by foreign armies doing service in the tropics.

Perhaps the most startling innovation that could be made in the Marine uniform would be the introduction of shorts. There are a great many who would scoff and even blush at such a thing. Shorts are cool, or else why would thousands of civilians be wearing them? If they were not cool, why would the British army stationed throughout the world wear them? The simple answer is that they are the reasonable type of trouser to wear in the tropics. Others have recognized this fact and have acted accordingly. It is admitted that they are not suitable for crawling through lantana or cactus, but is such activity the customary thing for men guarding a navy yard or in the tropics? If you wish to wriggle through lantana, you can

XUM

use slacks with leggings, but have pity on those who stay behind. It is undeniable that shorts can be quite chilly at night in places where the temperature gradient between night and day is very great. However, it is not suggested that slacks be entirely done away with, but only that the regular issue be supplemented by a couple of pairs of shorts for daytime use.

Men ordered to duty in the tropics should thus be equipped, in addition to regular issue, with one sun helmet, perhaps two such shirts, and two pairs of shorts. Added expense of such uniforms would be small and would shrink into insignificance when compared to the increased comfort, morale, and efficiency of the organization concerned.

And so you have a sensible uniform for wear in the hotter climes—sun helmet, shirt with short sleeves and a turn down collar, and shorts. It might not satisfy the esthetic tastes of many and not appear particularly chic to others, but it no doubt would be a great deal more comfortable for the forgotten men of Guantanomo Bay, Coco Solo, Pearl Harbor, Guam, and Cavite.

CHARLES A. SPEARS NOW WITH LaPLANT-CHOATE MANUFACTURING CO.

Charles A. Spears, widely known to construction men and roadbuilders, has resigned his position in the Caterpillar Tractor Co. sales department to become director of sales development for one of the company's allied manufacturers, the LaPlant-Choate Manufacturing Co., Inc., of Cedar Rapids, Iowa.

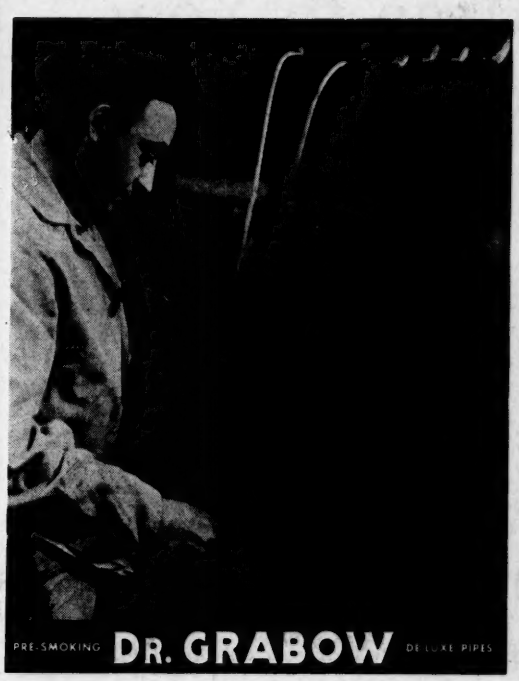
Mr. Spears has been identified with construction progress since modern earthmoving methods had their beginning. He is regarded not only as a foremost sales authority in this field, but in the sphere of construction engineering as well.

After being graduated from the University of Southern California with the degree of civil engineer, Mr. Spears founded the Spears-Wells Machinery Company of Stockton, California, in 1912, and became vice president and general manager for this manufacturer of graders and oiling machinery. He left the firm in 1929 to become district representative of Caterpillar Tractor Co. in the California area, later serving as supervisor of government and construction sales. Of late he has been connected with the sales development division.

Mr. Spears' services are acquired just as the LaPlant-Choate Co. completes its new 700x100-foot factory addition, an dobtains additional plant site suitable for further expansion adjoining the present property. The company now builds a complete line of hydraulic or cable-control carrying scrapers ranging from 2 to 35-yard capacity. Its products also include trailbuilders, bulldozers and tampers.

While he will make his headquarters at Cedar Rapids, Mr. Spears will spend considerable time in the field in cooperation with his company's district representatives.

REVOLUTIONARY
PROCESS BREAKS IN DR. GRABOW PIPES



Linkman's mechanical pipe smoking machine scientifically breaks in the bowls of Dr. Grabow Pipes with fine tobacco. Time and time again the bowl is filled and smoked — the machine duplicating the slow, deliberate puffing of an experienced smoker, until a sweet cake is formed. No pipe is at its best until it has been smoked repeatedly. No other process gives a pipe such a permanently sweet cake as Linkman's mechanical smoker.

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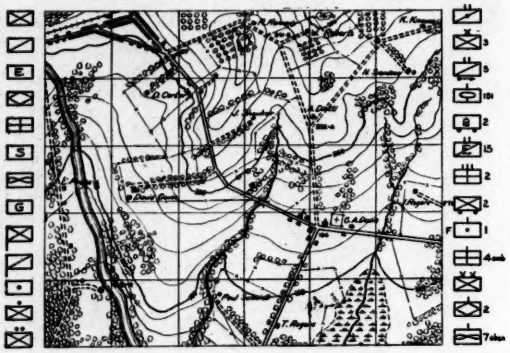
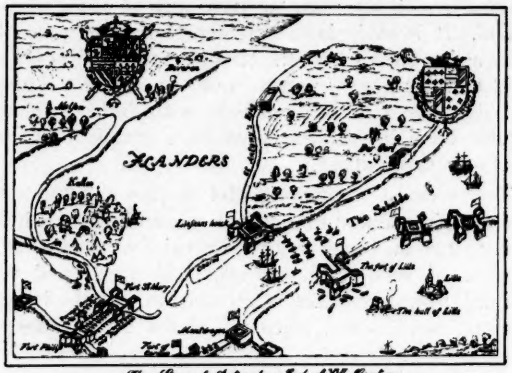
What Does a Map Mean to You?





The Siege of Antwerp - End of XVI Century
A Modern Sketch from an old Engraving of About 1960.

●

BY LIEUT. EDGAR FARR RUSSELL, *Inf-Res.*

WHAT would you think of an engineer who could not read a blueprint? Or a druggist who could not read a prescription? Suppose you were about to engage a lawyer to defend you in court, and you discovered that he was not very familiar with the legal terms he had to read? What would you do? Don't tell us.

Modern civilization is sweeping on so fast that its speed is difficult to detect. To keep abreast of events, the individual and the nation should be able to *read* and *to interpret* every swift happening or phenomenon. There must be an understanding of more than mere words. One must understand symbols and the abstract.

Maps are one phase of modern civilization where symbols are used and imagination must be exercised.

Courtesy "The Military Engineer".

Portion of pictorial relief map.

Maps are found in many professions and occupations. Their use is widespread among engineers, surveyors, miners, aviators, builders, geologists, seafarers, statesmen, draftsmen, and in various branches of the Government. To the military man, a knowledge of maps and their use is essential. He should be able to read any map, particularly a military map, so rapidly that it does not merely *represent* the ground and its features, but can even be so visualized that it *is* the ground. Such an accomplishment may be obtained from an understanding of the rudiments of maps and map-drawing and from continuous practice in their use. If, in addition, a deep interest in maps can be aroused, one is certain to become proficient in interpreting and using them. Perhaps a hobby, the collecting of maps ancient and modern, will aid in serving this purpose; or, if one is gifted with the pen and pencil, he can learn to become a cartographer himself.

There are a great variety of maps. No doubt the first maps in the world were rude picture drawings. They remained in a rather crude pictorial form until relatively recent times.

As man progressed through the years, his maps and charts improved also. Often the improvement was only in the skill of the draftsman, not in accuracy. One may well imagine what the old maps were like! Boundaries were drawn from conceit—not from authentic information—and the lands and waters were peopled, according to the draftsman's imagination, with sea serpents, fabulous monsters, and terrible people. Entire continents were often omitted, and rivers flowed up hill and down dale merrily, in disregard of Newton's famous law.

The first map of which a record is obtainable was one made by Anaximander, a Greek who lived from 610 to 546 B.C. Hecatæus, another Greek (550 to 475 B.C.), visited Egypt, Libya, Spain, Italy, and Iran, and he made a map which covered more territory than Anaximander's map. Thales, still another Greek, who lived in about the sixth century, B.C., divided the earth as it was known at the time, into five zones according to climates, much as they are designated today. It was Thales who introduced the equator and the meridians.

The originator of scientific geography was Eratosthenes, a librarian of Alexandria, Egypt. During the second century B.C. he estimated the earth's circumference as approximately 25,000 miles. Many of the ancient geographers and cartographers assumed, or calculated, that the earth was a sphere. Aristotle, who is usually credited with proving that the earth is a sphere, estimated its circumference at 40,000 miles.

Geography as a modern science has its beginning in the works of two Germans, Alexander Von Humboldt and Karl Ritter, who were a part of the scientific movement in Germany during the Nineteenth Century. From the efforts of such men, great progress has since been made in the related fields of anthropology, geology, geodesy, geographical exploration, and physiography. Military and naval men have been substantial contributors to such knowledge.

Today, our maps are accurate and are being continuously revised, corrected, and brought up to date. Maps made by the Government are dependable in every way. All that is necessary is a personal skill in their use.

As all maps, except models in relief and terrestrial globes, are made on flat surfaces or planes, which for practical purposes are sheets of paper, it is necessary for the map reader to be able to visualize elevations and depressions. In other words, the three ordinary dimensions are represented on a plane, a sheet of paper, which has two dimensions. The map reader, by his imagination, must supply the other dimension. Who has wondered how many battles have been lost for want of this imagination?

Because the earth is a sphere and because it is impossible to represent a sphere correctly upon a plane, geographers and makers of maps minimize such a disproportion by indifferent map projections which show as accurately as possible the lines representing latitude and longitude. The only way that the earth could be represented as it

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actually is would be to reproduce it with its mountains, valleys, oceans, and rivers on a sphere.

Terrain has always had an important role in every war or campaign. Witness the recent war in Finland, which is known as the "Land of a Thousand Lakes." Suppose the geography of Finland showed the country to be a dry plain in a temperate climate, how different would have been the conduct of both the offense and the defense! If terrain plays such a deciding part in war, then maps which are terrain on paper are likewise important.

In "The Solution of Map Problems," Special Text No. 10, Army Extension Courses, the introduction states, "Most professional men familiarize themselves with the technique of their various duties by actually performing them. Not so in the profession of arms, for war is not continuous, and an officer must perfect himself in the perfrmance of his probable battlefield duties prior to the outbreak of hostilities. Chief among the various means which afford this practice, especially for indoor study, is the 'map problem,' an exercise in which a military situation is stated and solved on a map." Facility in reading maps is therefore an essential during peace, as well as in times of war. For the officer who desires to perfect his knowledge of maps, particularly military maps and phases of map work, it is suggested that such pamphlets as TR2180-35, TR190-24, and TR210-10 be obtained from the Government Printing Office in Washington, D. C. Other publications, military and civil, will suggest themselves to the interested officer who is willing to become an amateur cartographer.

Much has been said about the ability to read and interpret maps. There is also a need for the ability to make maps. An officer will be better prepared for his profession if he is able to make, quickly and accurately, such maps as may be needed in his military duties. A knowledge of the conventional signs and a skill in good lettering are a strong foundation on which to build the structure of cartography. Add to these, the complete understanding of what contour lines mean, and the officer is fairly well equipped to turn out maps of his own.

Certainly he will bet able to express his ideas and commands graphically, so that there will be no doubt as to their meaning.

"The Charge of the Light Brigade" is good literature, but it had its origin in what must have been quite a military misunderstanding on some officer's part. The picture which a map can convey aids in eliminating misunderstanding and possible hesitation caused by vagueness. There is nothing vague about a map—if one can speak its language!

NOTES ON THE M1 RIFLE

(*Continued from page* 24)

gress being in session during the summer months, all of the commissions could not be executed at one time, and the students reported in from 1 July until 18 September. School began on 5 July. Only those students from the Naval Academy and two aviators, previously commissioned, were present for the opening of school.

Original plans in marksmanship called for a division of the class into three groups:

I. Thirty to fire the M1,
II. Thirty to fire the M1903, and
III. The remainder to fire the M1903.

Group II was to be used as a control group as a check against the results of Group I. It was hoped that the two groups could be so constituted that an equal division of "talent" would be possible in order to obtain a fair comparison.

In order to carry out these provisions the twenty-nine officers present on 5 July were divided into two groups, one of fourteen for the M1, another of fifteen for the M1903, chosen alternately from an alphabetical roster. It was anticipated that the remainder of the group would be

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filled alternately as the students reported. An effort was made to divide the students so that each group would represent an average cross-section of the ability of the student body. Unfortunately, again, due to the slowness of arrivals, the lessening of the remaining time available for instruction prior to our departure for Cape May Rifle Range, and the necessity of increased time for instruction in the M1 as against the M1903, the procedure had to be modified. The first sixteen officers to report from the civilian colleges were designated to fire the M1 rifle. Since any number of commissions mailed out on the same date would of necessity cause those living closest to Philadelphia to report earliest, those first sixteen officers to report were from the east coast and the near south. As will be shown later this had a bearing on the results obtained.

Group I was therefore divided into sub-group A and sub-group B. Sub-group A consisted of the fourteen officers present on the opening of school. Sub-group B consisted of sixteen officers from different civilian colleges. As the instruction of sub-group A was well under way prior to the reporting of sub-group B no effort was made to incorporate the two sub-groups into one class. The instruction begun on sub-group A was carried forward to completion and sub-group B was given identical instruction, although somewhat curtailed as will be shown later.

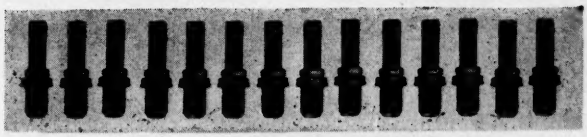
The instruction given to sub-group A consisted of the following:

1. Mechanical Training:	
a. Disassembly and assembly	4
b. Functioning	2
c. Immediate Action and Stoppages	1
d. Care and cleaning	1
	8 hours
2. Preliminary Marksmanship Training:	
a. Sighting and Aiming	2
b. Position Exercise	1
c. Trigger Squeeze Exercise	1
d. Timed Fire Exercise	1
e. Range Firing .22 caliber	43
	48 hours

The instruction in mechanical training was given at the same time that the instruction began for the students armed with the M1903. The first two hours (not included in the total of eight hours above) were devoted to instruction in the nomenclature and care and cleaning of the M1903 rifle since all of the student officers were armed, for purposes of instruction, with this weapon.

During the time indicated above as .22 caliber range firing the students were given instruction in firing the .22 caliber rifle, slow fire only, at all positions. No attempt was made to familiarize them with bolt manipulation, it was considered that any instruction given along this line would be a hindrance rather than a help. The work begun in sighting and aiming, position exercises, trigger squeeze exercises and timed fire exercises was carried on during the intervals when the .22 range was not available.[3] The instruction in these subjects being of a progressive nature,

[3]Range firing with the .22 caliber was concurrent with M1903 group.



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..o attempt was made to exhaust the possibilities of any particular part during the brief time allotted to it originally. (See schedule above.) In addition some time was devoted to the discussion of range procedure, score books, and the effects of wind and light. During the last week of training on the .22 caliber range the M1 shooters were given an opportunity, on the one thousand inch range, to fire several clips of ammunition, both at slow and rapid fire, to become familiar with the action of the rifle under actual firing conditions. The .22 caliber range firing culminated in a slow fire match between the M1 and M1903 shooters, stakes being a beer party at Cape May, which the M1903 shooters won.

It is considered that this sub-group, when sent to Cape May, was ready to go on the big range prepared to fire for record practise. Their muscles had become accustomed to the sling and to the various positions, they were able to assume the various positions rapidly and with almost a minimum of lost motion. They had had several hours of "dry" shooting and were fairly familiar with the appearance of the sights.

In contrast to this, sub-group B, arriving late, could not be given all of the preliminary training that it was desirable for them to have. Where sub-group A had 48 hours of preliminary training, they had but 16 hours, which was, to say the least, not adequate. However, the sub-group of the M1903 group which corresponded to the sub-group B of the M1 was no better off, so that for purposes of comparison both groups stood about equal in the amount of training. As mentioned before, this lack of preliminary training was forced upon us by the late arrival of the student officers.

All of the difficulties, from the point of view of the instructor, which were encountered with Group I were all caused by sub-group B, and these could be laid without reservation to the lack of adequate preliminary training in Philadelphia prior to the move to Cape May. Steps taken to overcome this difficulty will be dealt with later on.

Before transferring ourselves mentally from Philadelphia to Cape May it might be of interest to note the background of these officers prior to their entry into the Marine Corps in an effort to establish some grounds for comparison both to Group II and to the Marine Corps in general.

As previously stated twelve of the officers were from the Naval Academy where they had learned to take instruction as it was given and to apply it. They had, in addition, fired the M1903 rifle over the Naval Academy course and could be said to be famliar with that rifle. At least they were no longer "gunshy." The same might be said of the two aviators, although they were graduates of civilian colleges and their rifle experience was that obtained from the Reserve Officers Training Corps. They had had one year's commissioned service. The remaining sixteen officers were fresh from civilian colleges, from courses ranging from Civil Engineering to a major in Philosophy, and the only common background was their work under Army personnel in the Reserve Officers Training Corps. Of the sixteen all except three had had previous experience with the M1903 rifle with varying degrees of proficiency. The background of this group was quite similar to that of the M1903 group with the exception of the fact, which appears to the writer to be important, that the geographical location of their early life and training was different. Anticipating a bit, to the outcome of the record practise for the Basic School, the following are the average scores for the time zones of the United States:

	Eastern	Central	Mountain	Pacific
M1903	301.3	305.3	306.3	312.5
M1	356.4	363.3	367.0	

It should be noted that all of the M1 shooters of sub group B came from the Eastern Seaboard and were from the group with the lowest average score for record day shooting. The Central and Mountain time scores indicated for the M1 were made by officers from the Naval Academy who were in sub-group A. It seems reasonable to conclude therefore that the results obtained by the M1 group as a whole should be viewed with this condition in mind and to grant the assumption that if the group had represented a fairer cross-section of the personnel of this year's class the results obtained would have been higher.

Groups I and II moved to Cape May for their record practise season which lasted from 7 to 16 August, 1939. During the daily firings a careful check of all shooters was made to determine their progress and to uncover any difficulties that they might be having. Considerable difficulty was had with sub-group B. The positions assumed by them were not completely satisfactory, they were slow in assuming the position when called upon for rapid fire, their muscles had not become accustomed to the adjustment of the sling, and one case was discovered where the student had an improper idea of the manner in which to squeeze the trigger. These matters were partially overcome by instituting school work for the shooters from 1800 till dark each evening. Those who had turned in a bad score at any one range or who were particularly deficient at all ranges were assigned to this class for extra instruction. By the time preliminary record firing arrived there were still five members of the sub-group B (and none in Group II, M1903) who were not sufficiently advanced to be fired for preliminary record.[4]

The firing schedule was arranged to give each group as even a break as was possible on light, weather, time of day, etc., by putting the M1 shooters into two relays and the M1903 shooters into two relays, supernumeraries forming the fifth relay. Two relays were assigned to the pitts at one time, both relays being from the same group. Alternate days they pulled targets first, then fired first, thus getting an even exchange on the best conditions in the early morning hours.

Group I fired for record on 16 August, firing one day prior to Group II. The results of the firing, showing daily average scores, are shown in the accompanying table.

It will be noted that one officer failed to qualify with the M1 rifle. It is believed that the reason therefore may be largely attributed to the short training period avail-

[4]They were held over for additional instruction and fired with the subsequent detail. Four of the five qualified as Marksman, the fifth unqualified. Lest it appear that the Basic School was not teaching adherence to regulations and prescribed ammunition allowances, let it be recorded here that the purpose of the Basic School is to train the officer personnel as platoon leaders capable of instructing their enlisted men and that there is no restrictive ammunition allowance for instruction purposes. It was considered to be of greater advantage to the students concerned to have additional instruction than to force their shooting to complete the comparison test.

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AVERAGE SCORES

	M1903										M1					
	SLOW FIRE				RAPID FIRE						SLOW FIRE				RAPID FIRE					
Date	200	300	500	600	200	%*	300	%	500	%	200	300	500	600	200	%	300	%	500	%
9	19.57		20.03	19.97	23.61	94.4	23.07	92.3	19.83	77.3	17.7		19.5	20.3	37.1	94.6	34.9	87.2	29.1	72.8
10		34.91	20.5	20.5			43.8	87.6	38.1	76.3	18.1	18.6	20.3	19.7	63.9	79.9	66.4	83.0	58.0	72.5
11	39.8	40.5	45.1	42.1	46.6	93.2	45.8	91.6	40.3	80.6	37.8	36.6	41.6	37.1	68.7	85.9	68.4	85.5	57.9	72.3
14			22.2	20.4	47.5	95.0	44.8	89.6	41.1	82.2			42.6	37.6			68.7	85.9	59.9	74.3
15	40.6	41.7		19.9	44.7	93.4	45.3	90.6	39.5	79.0	39.7	40.0	42.5	39.6	68.4	85.5	71.5	89.4	61.1	76.3
16											39.4	40.5	41.5	39.4	71.9	89.9	70.1	87.6	59.4	74.2
17	41.6	42.1	45.6	44.5	47.3	94.6	45.7	91.4	42.8	85.6										

QUALIFICATION BREAKDOWN

Minimum Score Required	No.	%	Average Score		No.	%	Average Score	Minimum Score Required
315	9	27	317.1	Expert Riflemen	5	17	388.6	379
300	19	58	307.7	Sharpshooter	10	35	366.2	361
275	5	15	289.8	Marksman	13	45	351.5	332
	†33	100	308.2	Total Qualified	28	97	362.0	
				Total Unqualified	1	3	324	

*Percentage of Rapid Fire score is found by determining the percentage of the actual score to the possible score so that the score of the M1903 and M1 may be directly compared on a common basis.
†The M1903 group is augmented by three staff officers. The M1 group, less five hold overs, plus four staff officers.

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able at Cape May which made it necessary to carry on instruction with other infantry shoulder weapons concurrently with that of the rifle. It is interesting to note, however, that this officer was held over for the subsequent detail and was then able to turn in a score of 378 x 440 to qualify as sharpshooter.

As stated above it was desired to have the two groups as nearly identical as possible to test the accuracy of the M1 rifle in the hands of the students as compared with the M1903 in the hands of other similar students. While this could not be fully carried out to the desired end it is felt that the results obtained from the two groups can be compared without serious detriment to either rifle. The following table gives the scores showing the daily average of the two groups. As reduced to a basis for common comparison the following table gives the results at the different ranges with the difference in scores representing that of the M1 below that of the M1903:

	M1903		M1		Difference
Range	Score	Percentage	Score	Percentage	in scores
200S	41.6		39.4		—2.2
300S	42.1		40.5		—1.6
500S	45.6		41.5		—4.1
600S	44.5		39.4		—5.1
200R	47.3	94.6	71.9	89.9	—2.3
300R	45.7	91.4	70.1	87.6	—1.9
500R	42.8	85.6	59.4	74.2	—5.7

It will be noted in the table above that the M1 most nearly approaches the M1903 at three hundred yards range, and that this difference increases greatly as the range increases up to six hundred slow and five hundred rapid fire. It is believed that there are three factors which, if taken into proper consideration, will lead to an explanation of the differences in the scores attained with the two rifles.

FIRST. An examination of the hammer action of the M1 rifle will reveal that the hammer throw occupies a considerable space of time between the release of the hammer hooks by the trigger and the striking of the firing pin by the face of the hammer, and that the hammer face travels through an arc of approximately forty degrees. This "time lag" between the time the firer releases the trigger and the actual firing of the round is sufficient in the off hand position to account for some of the "six o'clock bulls" being scored as misses. Being inexperienced shooters, the student officers were not careful about properly "following through" on the shot to insure its alignment until after the round had left the barrel. In a lesser degree this time lag has its effect on all positions and as the range increases slight errors of displacement during the time lag become magnified to alarming proportions.

SECOND. In order to justify its existence, any rifle in use in the military service should be primarily a combat weapon. Those features which will increase its efficiency in combat should be retained and exploited. The M1 rifle was designed primarily as a combat weapon capable of delivering a high volume of fire in a short space of time. The rear sight of this rifle, among other features, contains an aperture which is 0.08 inches in diameter. This size is the same as that of the No. 8 sight for the M1903, but with this important difference, it is set aft of the receiver opening rather than forward of it. This brings the sight of the M1 closer to the eye of the shooter a matter of some six and one quarter inches. The effect of this larger aperture is such that at six hundred yards the firer is able to see about five targets on either side of his own, and about one half of the length of the upper part of the barrel of the rifle. This apparently large aperture gives rise to trouble in centering the front sight in the rear sight, particularly as regards elevation. Shot groups with this rifle during rapid fire all showed a tendency to be elongated vertically on the target. However, due to the enlarged field of view incorporated in this sight, it is particularly desirable for field conditions where targets, at best, will be indistinct and difficult to pick up.

In connection with the matter of size of the rear sight it is interesting to note that in 1932 (July to December) under the qualification scores now in force, recruits firing the M1903 rifle with the No. 10 sight made the following percentages of qualification:

Ex.	SS.	MM.	Unq.	
1%	7%	79%	13%	[5]

However, recruits firing for qualification during the target year 1937 using the No. 6 sight had the following percentages:

Ex.	SS.	MM.	Unq.	
4.3%	21.2%	48.7%	25.8%	[6]

This seems to indicate that while it may be more difficult to fire with the smaller sights, much better results are obtainable in the line of high scores. However, the No. 6 sight is open to the objection that on days when "conditions" are not exactly all that might be desired it is difficult to distinguish even so plain an object as a six foot target.

THIRD. In order to make the best use of the high rate of fire of which the M1 is capable it is necessary for the average shooter to be able to deliver this fire rapidly and accurately. To test his ability to do this certain ranges are fired wherein a premium is placed upon both accuracy and rapidity of delivery. How these limits of time and number of rounds per time interval are determined are not within the scope of this subject. The following discussion is intended to present the views of the writer on the present limits as laid down by current orders and should not be taken as indication that they should be changed. These opinions are voiced in an effort to show some of the factors that effect the apparent accuracy of the rifle, as compared to the M1903.

At five hundred yards the time allowed in which to fire the sixteen rounds is seventy seconds. Without allowing any time for changing clips in the middle of the string, this gives an allowance of four and three-eighths seconds per shot. This time was apparently ample for seasoned shooters but not for those just beginning. The tendency was to "spray" the target during rapid fire. It is believed that this factor (time) more than any other was

[5] Headquarters Bulletin.

[6] Headquarters Bulletin. This firing was done with an ammunition allowance of 340 rounds as against 275 rounds in 1932.

responsible for the low scores in rapid fire. In connection with "timing" it should be noted that to fire sixteen rounds in the allotted time, the firer must be in such a position that he will roll "back to battery" after the recoil of the shot has been absorbed. Experienced shooters will realize that this is essentially true of any weapon. It is particularly true of the M1 in rapid fire. Those shooters who had had the benefit of the full course of preliminary training had good positions, could assume them rapidly and hold that position through a string of rapid fire. Those with less training had considerable difficulty. Since the time allowed to fire the sixteen rounds at three hundred and two hundred yards is sixty and fifty seconds respectively, it will be apparent that the spraying effect increases as the range decreases. It was found that the time at two hundred yards was not quite sufficient for even the most proficient to get off sixteen well aimed shots.

To sum up these effects upon the apparent accuracy of the M1 rifle in the hands of the average shooter we see that they are due to:

1. Mechanical functioning of the trigger mechanism.
2. Size and position of the rear sight.
3. Training of the individual.

It is an easy matter to point out to anyone what the fault of any particular situation may be. It is a different matter to tell exactly what the remedy for that fault is, or what steps must be taken to correct it. One can, however, advance ideas which may help to solve the problem. Let us look at these three causes which apparently effect the accuracy of the rifle to see if some solution can be given.

The mechanical functioning of the trigger mechanism is a built-in characteristic of the rifle which cannot be changed without a major modification of the weapon. Therefore to overcome the "time lag" present the only solution is in recognizing that it exists and to properly train the shooter to overcome it. This is a matter of training.

The size of the rear sight aperture. This is a matter which could be easily changed during the process of machining the aperture but it is doubtful if such a change is warranted. It is entirely possible that a modification of the present aperture could be made by simply etching a horizontal line through the axis of the opening and filling this line with a white substance. A ready reference line for horizontal centering of the front sight blade would then be available and much of the difficulty of centering would be overcome while still retaining the desirability of the large aperture. The position of the rear sight is something that would take a major change in the design to adjust and its desirability is debatable. Once the shooter is made to realize the importance of proper sighting and becomes accustomed to the position and size of the aperture then it disappears as a liability. This is a matter of training.

In view of the foregoing it is the opinion of the writer that the "accuracy" of the M1 rifle in the hands of the average shooter is dependent upon the state of training of both the instructor and the pupil. When the peculiarities of the rifle are recognized and an honest effort is made to train the shooter to overcome them these peculiarities then become advantages and progress will be rapid. In the

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next few years, as the rifle becomes general in the Marine Corps, the "accuracy" of the rifle, as reflected by the scores attained in its use, will become greater and greater.

This will be accomplished despite any great increase in the built-in or factory equipped accuracy of the rifle itself. Based on the assumption that the accuracy of the M1903 is the desired end, the M1 at present is not up to that standard. However, give the M1 thirty-seven or even twenty years of use and the results obtained by it may far surpass those of the M1903.

In order to determine the reliability of the mechanical functioning of the rifle a careful check was kept of all malfunctions of the rifles in use during the firing at Cape May. In all there were eleven cases of improper functioning. Of these six could be attributed to the rifle itself and the remaining five were the result of either improper care or the introduction of foreign matter into the rifle.

Malfunctions due to the rifle included.

One case where the rifle would fire in bursts of two or three shots at one pressing of the trigger. This was at first thought to be the fault of the officer shooting the rifle[7] but tests made with it by two range officers and the armorer resulted in the same type of fire. The malfunction was reduced by replacing the hammer spring.

Three cases where improper trigger actions were evident. The spare parts issued with the rifles included only one part for each item of the rifle. With thirty-five rifles to service this was hardly sufficient. One weekend all of the rifles issued to the students were called in and by a process of trial and error exchange between rifles of hammers, hammer springs, and trigger pins the three cases just mentioned were reduced. Evidence of both slight and excessive burring of the hammer hooks led to a trial at smoothing the hooks down with a stone. However, the hammer hooks and hammer had been so well hardened that a stone would not touch the surface. Hence the exchange was necessary.

Two cases where the sight drums dropped during rapid fire. Both of these cases were apparently due to a loosening of the holding screw in the rear sight assembly. The loosening permitted the drums to slip, in each case, two notches at a time. Tightening of the screw removed the difficulty.

Of the five cases of improper functioning due to either improper care or the introduction of foreign matter in the rifle:

Three cases were of failure to eject due to an accumulation of brass chips in the ejector housing. These brass chips restricted the travel of the ejector and prohibited its proper functioning. On being cleaned and lubricated with a small amount of Dixon's No. 3 graphite there was no recurrence of the stoppage.[8]

Two cases were of failure to extract due to dirty chambers. These were due to sand particles being introduced into the chamber during firing. It is remarkable to note that of all of the firing done at Cape May with the M1 that there were only two such cases. It is to be expected that if and when the M2 ammunition becomes available for general issue this class of stoppages will be either entirely eliminated or greatly reduced.

During this time at Cape May there were fired 15,654 rounds with the M1 rifles. With only eleven malfunctions in that number of rounds it does not appear that the rifle is "no good".

As a further test of the "suitability of the rifle for field use" it was given an additional test during the Basic School encampment at Indiantown Gap, Pennsylvania. Permission was obtained from the Director of Target Practise to submit the rifle to whatever tests we might desire. An attempt was made to test the rifle under conditions which might be more severe than the rifle would be called upon to stand in field service.

One of the M1 rifles, assigned to one of the student officers, was selected for the test. During the course of a morning devoted to musketry the student was told of the proposed test. He was directed to turn in his rifle to the armory each evening and to do nothing to the rifle in the matter of care and cleaning. The rifle began the test with normal cleaning and prefiring lubrication. Each evening the rifle was hung on a nail outside the armory available to the elements. For two nights and two days it was subjected to a rainstorm. On two occasions a bucket full of water was poured over the receiver. The test lasted for twenty-five days, on fifteen of which it was fired and functioned perfectly. The last ten days of the test the rifle was in storage in the armory in Philadelphia. On the twenty-sixth day it was again fired. The first twenty-four rounds failed to extract. On the fourth clip, prior to loading, the cartridges were subjected to a copious amount of saliva. Six rounds failed to extract but the seventh and eighth functioned perfectly. Four additional clips fired functioned perfectly.

Upon disassembly the bore showed some pitting. Other parts showed superficial rusting. The lubrication was still satisfactory and the gas cylinder plug carried only a small amount of carbon deposit, not sufficient to hinder the functioning. After the bore was cleaned there appeared medium pits from the origin to a point about one-half way to the muzzle. These pits were all in the grooves, on the leading edge, and the lands were all in excellent condition.

It is believed that this test was beyond the use and care which a rifle would receive during combat even under the most strenuous type of warfare. Units which do not have some opportunity to care for their weapons at least once in twenty-five days would have long since lost their combat efficiency. Since the rifle under test functioned perfectly for fifteen days it is reasonable to assume that in the hands of an enlisted man it would respond in a similar fashion. No man is going to completely ignore his rifle for that length of time if his life depends upon its proper functioning.

These are the opinions of the writer on the subjects of "accuracy" and "suitability for field use" of the Garand Semi-Automatic Rifle.

What do you think about it?

[7]It is possible to do this with a properly functioning rifle, although it is rather difficult.

[8]An effective substitute for Dixon's No. 3 graphite can be made from fine flake graphite and white medicinal vaseline by intimately mixing the two ingredients.

BOOK REVIEW

ROMAN EAGLES OVER ETHIOPIA, by Colonel Pedro A. delValle, U. S. Marine Corps, The Military Service Publishing Company, $2.50.

The eyes of the world are now focused upon Italy, her ambitions, intentions, and potentialities. This book gives an accurate account of what happened in Italy's conquest of Ethiopia as the author was one of the few foreign eyewitnesses from the beginning to the end and was the only foreign attaché who saw action with the Italians during the campaign.

The author has a clear and pleasing style and has separated the operations into the De Bono and the Badoglio periods, with a section devoted to the southern operations. There are many sketches and maps which assist the reader in following the operations and many interesting illustrations which add a pleasing touch.

Colonel delValle covers the dispositions, successive positions, communications, supply, and all the tactics and strategy of the operations. In addition the motivating factors, and the inside incidents affecting morale and efficiency are of considerable interest.

The opening section is devoted to an introduction by the author in which he tells of his personal experiences.

With the situation in Europe as it is, this book is more than timely and will prove of vast interest. It is recommended for any library, either military or civilian. Every officer should read it in order to keep abreast of times.

R. McP.

A TWO-FISTED NAVY

(*Continued from page 17*)

The obvious answer is that Manila is no more indefensible a "salient" for us than Gibraltar, Singapore, Hongkong, Colombo, Port Stanley and others are for Great Britain, than Bizerta is for France, or Ethiopa or Rhodes for Itlay. In naval warfare there is no such thing as a salient. Does England decamp ingloriously from Hongkong?

A base like the Philippines exists for the security and mobility of a fleet. As long as the battleforce is "in being," even thousands of miles away, it is unlikely that an enemy would venture an expeditionary force of adequate size to the islands. As long as command of the seas is not wrested from us by the destruction or containment of our battlefleet it would be too risky an affair.

> "It would not be necesary to send a fleet to Manila, or to aid forces besiged in Luzon. The fleet's natural zone of operations would be in the North Pacific between Hawaii and Alaska. With it there, threatening Japan, the Philippines might well for a time be left to their own present and extended fortifications, supplemented by aircraft and sumbmarines, to protect themselves against any expedition Japanese would dare detach in face of our fleet." (The Philippines and the Pacific, Eller, U. S. N. I. P., October 1938, p. 1478).

But even if the islands were taken, they could not be retained as long as our fleet was intact. As Lord Kitchener said of Australia, it could be taken but never kept, so long as the heart of British Empire and its naval fighting force remained whole, what happened at the periphery would be without enduring consequence.

War with Japan is unthinkable save as part of a general war in which the balance or distribution of world power was involved to our peril. But in such a war it is likely that the Philippines would be of enormous advantage in keeping strategic contact with other seapowers likely to be associated with us.

Japan does not need those islands either for her security or her subsistence.

At all events, Japan would probably never fight primarily to capture the Philippines. The cost would be too great. The game would not be worth the candle. To take them would be to serve notice of more extended objectives ultimately.

Therefore, the attempt to take the Philippines from us by Japan would serve as a bugle call for all other naval powers having interests in the Western Pacific. For there are others interested in that secondary balance of power in the East and Asia, and it would be at least as much to their interest as ours to keep us in the Philippines since their seizure by Japan would be a step towards Nippon becoming the absolute mistress of the Western Pacific and driving the European nations from that area.

So it is not for nothing that the Kaiser characterized the Philippines as the "key to the Pacific." With them in

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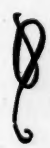

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Japan's hands, she could blanket the entire Asiatic coast from the Kuriles to Australia. They thus would constitute the keystone of that Asiatic hegemony it must be our policy to forestall. For the taking of the Philippines by Japan, Russia or China would mean the elimination not only of our seapower but that of all European nations in the Far East and so leave us all alone to face the problems of the Pacific on behalf of Western Civilization.

But Japan needs our friendship more than she needs those islands. Today Russia threatens Japan more than we do or than Japan threatens us. Moreover, should we be compelled to participate in any general war in which the seapowers were opposed by the landpowers, we would be associated with, not against, Japan.

The one superficially sound objection to our position at Manila is the fact that Japanese islands stand between Manila and Pearl Harbor. But the question is, if those positions are really mutually exclusive, whether we should give way to the Japanese or whether they should make way for us. But neither the positions of the Nipponese nor of ourselves are in fact untenable in the face of the other's.

It is true that our fleet steaming from Hawaii towards Manila on a mission to thwart a junction, of, say the Japanese and say the English fleet, would run many risks going through the submarine and mine infested islands of Japan. But with deviations open to us and efficient scouting, mine sweeping, screening, and patrolling, we would have a greater chance of getting through safely than we would of being able to command the seas once the enemy bodies have joined.

For war cannot be fought without taking risks. It is the lesser risk we must take and swift resolute action is a far better means of providing security than the attempt to be safe everywhere which usually means being safe nowhere, on land as well as on sea.

How cheaply we could put ouselves in position to defend the Philippines was indicated by the Hepburn Board, which held that the establishment of a fully equipped and fortified fleet base at Guam would assure the impregnability of that island and thereby asure "practical immunity of the Philippines against hostile attack *in force*" (Italics mine).

But, we have no such position as the Philippines in the Atlantic at all, the ocean in which our greatest interests lie, over which go most of our trade, and on the coast of which lie our most important cities.

Under the circumstances, attention must be called to the unique position of the Azores, to which our clipper airships now hop regularly.

Our chief naval bases on the Atlantic seaboard are Norfolk, Philadelphia, New York and Boston, whence our fleet can operate effectively against any enemy force approaching by the North Atlantic sea lane, and can reach out to meet a threat almost to the shores of Europe, that is, to Cape Farewell and the Azores. But beyond the Azores, it would be imprudent for our battleforces to venture.

The Azores (Horta) are 830 miles, however, from Cape Roca on the Continent of Europe, and 900 miles from Cape Cantin on the coast of Africa, and 1,107 miles from Gibraltar. San Miguel is 700 miles from the coast of Portugal and 750 miles to Cape Cantin. These distances are within the effective radii of short range units, such as destroyers, submarine chasers and scouting vessels needed to make sure that enemy fleets cannot get by, hugging the coast line to rendezvous with other enemy bodies.

This archipelago is nearer to our home bases than Madeira (Portuguese) or the Canary, or Cape Verde Islands (Spanish). Likewise, it is farther from the opposite shores of the Atlantic than the other islands mentioned above, and hence less subject to continuous bombing by air. (We exclude consideration of Flores and Corvo, which are 100 miles nearer to us but which have no harbor, Corvo being only a crater.)

Attention has already been called to the negative advantage of our having these islands, or, at least, of denying them to other strong seapowers. More recently, A. Lawrence Lowell ("Frontiers of the United States," Foreign Affairs, July 1939, p. 666) said, as to the Azores:

> "In the hands of a strong maritime power they might serve as a naval base from which a hostile fleet could reach any part of our Atlantic position in less time than our fleet would take to go from one end to the other of the line we must defend in that ocean."

And Major Eliot ("The Ramparts We Watch", p. 82) stated:

> "For these islands to pass into German control either directly or by means of a Portuguese puppet government dominated by Nazi and Fascist influence, would be a matter of such grave concern to this country, that it is a question that we ought not to resist it by force should it appear imminent."

Paraphrasing Admiral Mahan as to Hawaii (The Interest of America in Sea Power Present and Future," p. 47), the serious menace to our Atlantic coast and Atlantic trade, if so important a position were held by a possible enemy, has been mentioned so frequently in the press, that it may be assumed that it is generally acknowledged. Upon one particular, however, too much stress cannot be laid, one to which naval officers cannot but be more sensitive than the general public, and that is, the immense disadvantage to us of any maritime enemy having a base 2,000 miles from every point of our coast line from Maine to Florida.

Shut out from the Azores as a base, an enemy is thrown back for supplies and fuel to distances of 2,500 to 3,000 miles, or between 5,000 and 6,000 miles going and coming, an impediment to sustained maritime or aerial operations well nigh prohibitive.

On the positive side, however, an American fleet operating from the Azores can intercept and thwart the junction of fleets between the Atlantic and the Mediterranean, between the Atlantic and the Pacific; and fleets from three nations, one of which is Atlantic, one of which is Mediterranean, and the third of which is Pacific in origin, just as our position in the Philippines will allow us to do.

The only thing that an Azores fleet is not in a position to prevent, just as a Philippine fleet cannot prevent the junction of a Vladivostok and Sasebo fleet, is the junction of two or three North Atlantic European fleets. But otherwise, a fleet based on the Azores also can meet the kind of coalition that Admiral Leahy (supra) said could probably defeat our fleet.

It is a shorter distance from Hawaii via the Panama to the Azores than it is from Sasebo to Gibraltar, whether via Singapore, Aden, or via Sonda Straits, around Cape Hope or around Cape Horn. The latter two are, of course, most improbable routes.

This position, too, therefore, is one that is central, and permits operations on interior lines against all other strategic lines in the south and middle Atlantic. That is why the Azores were used as a base of operations by Phillip III in Queen Anne's War, as well as by the Allied and American fleets during the World War to forestall a German hegemony.

Nor is there a position in the Atlantic as favorable as the Azores, from which to meet a threat against Latin America or the Panama Canal, emanating from Europe, whether of expeditionary forces, munitions, volunteer corps, or "pirate" submarines. Also, being close to the European coast, American forces based there could keep open the gateway to European trade from which we could not be cut off entirely by weak naval forces as is now the case.

Little more need be said as to the necessity of preventing any stronger seapower from obtaining these islands. But it is a question whether so merely negative an attitude is adequate, whether the surest way of preventing these keys to our Atlantic sea approaches from falling into unfriendly hands, is not for them to be acquired by the United States, if it can be done righteously; that is, without objection of the Portuguese government and the Azoreans themselves.

Undoubtedly, they would be more effective in the defense of American interests than any of the islands heretofore mentioned as bases in the Atlantic that we should acquire, such as Barbados, Trinidad, Jamaica or Bermuda.

Those nearby positions might be of some tactical advantage, but strategically they would be of little consequence. As long as our fleet is in being nearby, those islands in our hands detract little from, or in the hands of enemies, add little to the difficulty of defending the approaches to Panama. Taking them over now would only eliminate the need for some minor operations by light forces at the inception of hostilities to prevent them being used as bases for commerce raiders. They are still too far away to serve as bases for sustained aerial operations.

Our interest in the Azores islands is purely defensive and surpasses that of any other nation in the world.

Their purchase or lease could possibly be effected on reasonable terms, since Portugal is an ally of Great Britain's. At any rate, any help, diplomatic, economic, or other, that we might give to any power should be conditioned in advance on assent to our purchase of these crossroad islands, or at least to the recognition of our paramount interests therein.

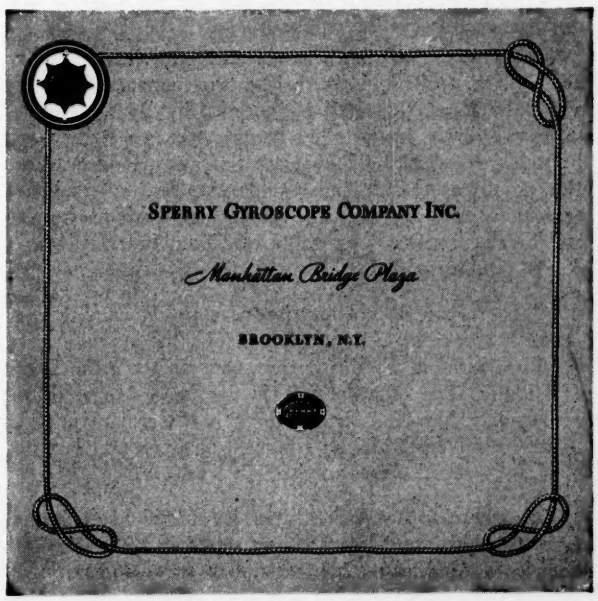
Nor is any third party likely to object to our purchase or assertion of special interest in these islands. For such objection would reveal a clearly unfriendly disposition. Any objector would confess thereby a desire to keep the security of the United States in doubt, whether from the creation of a hegemony or from an attack by a coalition. On the other hand, the waiver of objections would be some evidence, at least, that no such unfriendly dispositions are harbored. Hence, no opposition is to be expected, since it would be a boomerang of the first water, a diplomatic faux pas that would lead to American hostility to the objector nation at the first favorable opportunity.

In the hands of unaggressive America, these islands menace no one, great or small. In the hands of a great European power they menace the communications of the others. In the hands of a small power like Portugal, likely to become subservient to, or be conquered by a great power, they represent a menace to all others as well as ourselves. Europe should welcome the opportunity of putting them in our safe hands.

Whether or not an economic asset to Portugal, the Azores constitute, however, a serious strategic liability to Lisbon, since they afford a position which some European nation is likely to conquer Portugal itself to obtain. But insofar as they are of value to Portugal in a budgetary sense, they can be compensated for by an adequate price, payable, if preferred by Portugal, in installments. Insofar as they provide Portugal with either goods or markets, these can still be vouchsafed to her under tariff treaty arrangements perfectly within the realm of the practicable. Insofar as language and culture are concerned, equal privileges can be granted to both the Portuguese and English languages, as we granted them in Puerto Rico and the Philippines.

In fact, the exercise by Portugal of due prudence would appear to dictate the sale or lease to us of these islands, or the granting of special rights therein, to get something for them instead of waiting until some other nation, less actuated than the United States by the honest principles of giving a quid pro quo for what they want, should take them by force.

Napoleon sold us Louisiana; Spain sold us Florida; Russia sold us Alaska, and Denmark sold us the Virgin Islands, with such considerations in view. Portugal would



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do well to ponder whether we would not be the proper guardians of this position.

The fact that no great European power ever sought to take these unfortified islands from a weak sea power like Portugal is proof positive of the fact that they are of little defensive importance to any European power even today. Whereas, the fact that they were of importance to Spain when Spain was fighting for a position in American waters, and the facts that Admiral Rogers went by the Azores in 1813, that the U. S. Privateer "General Armstrong" was sunk in Fayal in 1812, and that the American fleet used this position during the World War as a base, supply deposit, and for an airdrome, indicates the historical significance of the group to the United States. During the World War Ponta Delgada was bombarded by a German U boat.

There was an interesting revelation of recent American interest in the Azores in the course of the fleet exercises of the American battleforce in February 1939, which were personally observed by President Roosevelt himself. These exercises were to test the defenses of the Atlantic approaches to the Western Hemisphere against a fleet which began operations in the neighborhood of the Azores.

While it is true that British fleet exercises too have taken place, and regularly, in the area between Gibraltar and the Azores, that area is conceded by British experts to be subsidiary to the other danger areas to British and French seapower, and the North Sea and Mediterranean. For no threat to England can develop in the subsidiary area unless it comes from the North Sea or Mediterranean and breaks through. As stated by Commander Edwards, R. N. ("Uneasy Oceans," p. 185):

> "There can be no question of a threat coming eastwards across the Atlantic Ocean (in the Azores Area), and at present, no threat can come up from the South Atlantic. The situation and the degree of danger in this area may, however, change abruptly if Germany is given back her West African colonies, or if either Germany or Italy secure bases in Spanish territory."

But whereas the Azores area is of secondary importance to British and French seapower, it is of prime significance to American seapower and a two-fisted navy.

QUARTERLY MEETING OF UNITED SERVICES LIFE MARKED WITH ENTHUSIASM

A wonderful record of achievement was revealed at the quarterly meeting of the Board of Directors of the United Services Life Insurance Company. This Directors' Meeting, which was attended also by members of the Advisory Committee started Tuesday, April 23, at 5:00 P. M. with an inspection of the Company's offices in the Normandy Building, Washington, D. C. After the tour of inspection the meeting was moved to the banquet room of the Army Navy Club, where dinner was followed by business reports and discussions which did not conclude until 10:30 P. M.

Those attending the meeting were enthusiastic in their praise of Mr. Emerson and Mr. Leverett for their untiring efforts in accomplishing a first-quarter gain in excess of 300%. This remarkable business was particularly commendable in view of the maneuvers and training period which withdrew many prospective policy owners from their home stations.

Indicative of the policy holders' high regard for the policies and practices of this Service Company are the following important points: United Services Life Insurance Company had the smallest lapse-ratio of any insurance company in the country and at the same time enjoyed the world's highest average policy ($6,974). The directors also noted that the Company has been building a commendable reputation as insurance counsel to the Services in the operation of the Estate Analysis Bureau for commissioned officers. The Directors and Advisory Committee members felt that the Company's unusually high average policy and remarkably low lapse-ratio would be reflected in great savings for policy holders.

While the Directors and Advisory Committee members felt that the first year's progress and gains of the first-quarter of the second year justified a continuation of their carefully conceived plans and operating policies, they also felt that no small share of the credit was due to the high caliber men in the field who reflected a high degree of integrity, sincerity, sound training and experience.

The Directors who attended the quarterly meeting on April 23 were: Mr. S. H. Emerson, President; Mr. O. R. Leverett, Secretary; Captain Reynolds Hayden, Sr.,

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U.S.N.; Captain William T. Stromberg, U.S.C.G.; Brigadier General Leigh C. Fairbank, U.S.A. The members of the Advisory Committee who attended were: Colonel Daniel P. Card, U.S.A.; Rear Admiral John Downes, U.S.N.; Commander J. N. Heiner, U.S.C.G.; Major August C. Jensen, U.S.A.; Dr. Franklin E. Campbell, Jr., U.S.P.H.S.; Rear Admiral Leon C. Covell, U.S.C.G.; Lieutenant Colonel Merritt B. Curtis, U.S.M.C.; Dr. Lloyd D. Felton, U.S.P.H.S.; Lieutenant Commander Morris D. Gilmore, U.S.N. (Ret.); Colonel Edwin C. McNeil, U.S.A.; Brigadier General E. A. Ostermann, U.S.M.C.; and Colonel Lewis H. Brereton, (A.C.) U.S.A.

United Services Life Insurance Company is particularly fortunate in having at its disposal the advice and counsel of high ranking officers from all branches of the Services and from all sections of the country.

THE RECRUITING DRIVE

(*Continued from page 23*)

study and consideration. The population, whether predominantly industrial or agricultural, whether it could be adequately covered by truck trips, the road net of the territory, its central location, bulk large. In the case of the Southern Division the large negro population is approximately fifty per cent of the total population of 29,000,000.

The maximum rental allowed for sub-stations is $25.00 per month. College towns are of doubtful value in the location of the station. Heavy industrial centers, in many of which scouts are out recruiting labor for war orders, are to be avoided. Naturally density of population is desirable.

Experience has shown that, while an officer's visit is indispensable in securing space, the sergeant assigned has little difficulty in arranging contracts for subsistence and lodging, and the expense of a sub-station in those details is small. The sergeant in charge must be selected as outstanding in military appearance, in tact, have initiative and be of excellent personal character.

The sergeant need not have qualifications as a clerk and typist, indispensable in a District Headquarters. That he should have educational qualifications was forcibly illustrated in the assignment of a new recruiter to a large city in the South. At the time of his assignment the Southern Division was stressing the educational opportunities of the Corps to offset the "Keep Us Out of War" feeling. He flooded the territory with letters to postmasters that bristled with mis-spelled words and ungrammatical sentences. The mystery as to why that particularly promising territory produced but one enlistment in its first month was solved when one of the letters found its way to Division Headquarters. A few days later the illiterate exponent of the Marine Corps Institute was walking post at a barracks.

As in the case of the District Headquarters rental free space in a poor location, distant from the main stem, is a waste of effort. In many cases the necessity to surrender

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temporary space, and to resort finally to commercial space, found the sub-station hitting its stride only too late.

Key Personnel

Division Headquarters had an enormous amount of work to handle during the drive. Its first sergeant must know all the answers and direct a multitude of administrative affairs. The sergeant in charge of quartermaster work, and the pay roll sergeant must be expert in their line. The two former ones performed duty that, in the naval recruiting service, was handled by men in the first three pay grades. The promotion of the first sergeant to sergeant major, and the quartermaster clerk to quartermaster sergeant in each of the four Division Headquarters is highly desirable, for without exception they could not have carried their heavy loads without the background of long experience.

The duties of the first sergeant of a district are multifarious. He is the spark plug of the force. He must be familiar with every detail of the office procedure, a typist, of considerable experience in quartermaster work and the schooling of untrained personnel. He has his daily reports of enlistments and activities, the weekly ones of transportation and cash payment vouchers, the monthly vouchers of telephone, office and garage rent; board and lodging, telegrams, reports of applicants, both accepted and rejected, of property expended, cost of supplies issued, expense report, gas and oil certificates, the forwarding of newspaper clippings. Then follow the quarterly reports on motor vehicles; the semi-annual reports on property and clothing issues, requisitions for office supplies, reports of tax exemption certificates and identification cards and fitness reports. Sandwiched in between are the miscellaneous reports on stragglers and deserters, shipments of household effects, open purchase requisitions, bids, proposals and other details. Until he has developed a publicity sergeant he must take that duty on.

The enlistment clerk must be a typist and neat writer. He handles the applicants and makes up the service record book with its accompanying papers. He must be neat and exact, and handle even the most obviously ineligible applicant with tact and courtesy.

Under the general heading of publicity, with its ramifications, the many-sided duties of the publicity clerk will be clarified. He is a potent factor in the organization of a successful recruiting district. Fundamentally he should be publicity-minded, with a keen nose for news value. Industry to a high pitch, a mixer to meet and strengthen relations with the press, radio, postmasters and movie theatre managers, are required of him. He should be able, with training, to send to the press only stories that by their conciseness and timeliness will ensure their publication, and he must not flood the Fourth Estate with lengthly or trivial matter, and, above all, cloak his propaganda skillfully, subordinated to the news of his story. Personal contacts with his media are necessary and he should be a free lance, ready to ride his steed of imagination untrammeled by fixed office hours. His writing of press releases, and of radio "spot" announcements must be distinguished by clarity and terseness.

Publicity in Recruiting

A District's success rests on the base of its publicity. The establishment of a new district soon bring to the front the value of legitimate and accumulative publicity. It must be first designed to acquaint the new community with the address of the new station. Secondly, it must expand without delay to "sell" the Marine Corps to its potential recruits. The new territory, where the uniform of the Marine Corps is as rare a sight as a camel in an Easter parade, must be made Marine Corps conscious by expert playing on the chords of the press, the radio, and all other recognized branches of the art of publicity. Posters portraying the marine of today in uniform, in various activities, play their part. Most effective of the long line of color posters that the Publicity Bureau has put out since its formation is that of a marine, in blues, walking post, almost life-size in its illusion and detail. That, at least, is the unanimous verdict of the recruiter and he has given to the poster the legendary title of Walking John. The blue uniform of the recruiting party, with white cap and belt, red trousers stripe and yellow chevrons, has almost a magical effect in a new territory.

The valued media of publicity, in their general relative pull, are the press, the I.R.D. or itinerant recruiting details, uniforms and posters, postmasters, the radio and the sound films.

News stories with a local angle are by far the most important. The news of a local boy's enlistment and transfer to the recruit depot, often several hundred miles distant, that carries the name and address of his next of kin, and of his school, is news to his many friends. Subsequent stories telling of his transfer to a ship of the Fleet or to a foreign station, his skill with the rifle or a gun of the Fleet, his promotion, find instant favor with the great field of the local press. They have the attraction of a magnet to his mates, are the source of pride to his family, and sow the germ for further enlistments in his home town. The lack of data for these news stories from contact officers in posts and at sea has long been a sore trial to the recruiting service.

Quality and not quantity of work marks successful publicity. A stream of stereotyped mimeographed stories is wasteful. Like motor oil the news story should be in the right place at the right time to keep the motor running smoothly.

In the Southern Division the placing of news stories mainly through postmasters has been followed. Each story is forwarded with a covering letter signed by the Officer in Charge, with a request that he place it in the local press. The postmaster is not only a leading citizen in the outlying communities but is invariably on intimate terms with the editors. That in the story is inserted the information that the news has come from the postmaster pleases him, for, if he were not a politician and publicity-minded he would not be a postmaster. Invariably he is not only glad to cooperate but invariably he becomes a lusty booster for the Marine Corps. A cardinal rule in press publicity is to be impartial, not exclusive, in sending out press releases. Where more than one newspaper is in the same city, the text of the story should differ for each newspaper.

I.R.D. Publicity

The development of the itinerant recruiting party has brought a strong ally to the recruiting service, not only

in the recruits brought in, but in its highly accumulative publicity. Collected statistics place the production of recruits by this method at thirty per cent. Many districts regard a single trip superior to any sub-station in results. The sergeant in charge, in addition to his ability as an operator, must be an experienced and tactful recruiter. Frequent visits to the medical examining room soon qualify him in his appraisal of applicants. The communities that he visits look upon him as typical of the Marine Corps.

I.R.D. trips should not be brief and hurried. At least two or three weeks in advance publicity should be given by the press, radio and postmasters of the listed places. The initial visit to a given locality, which will ordinarily include a number of towns in its schedule, may not prove immediately productive. Repetition, when the area becomes familiar with the appearance of the truck, the uniform and posters, begets acquaintanceship of value, contacts with the press, radio and editors. It further serves to break down the natural timidity of potential recruits. Thoroughness of plans will determine the ultimate effectiveness. Trips should rarely cover a period of less than from one to two weeks in order that the territory may be properly covered. If it is possible to add an additional recruiter he can be left in a town, arrange for temporary space, and do active recruiting while the motor vehicle operator visits the contiguous territory.

In the Southern Division when a district fowarded his schedule for approval, that approval was made automatic, and no time was lost in waiting for the written approval that followed. When possible promising applicants are returned by truck to the District Headquarters for final action. When the factors of distance, time or inclement weather made this impracticable the sergeant in charge issued transportation by rail.

On each trip the truck is well stocked with "A" signs and recruiting literature, and cards are placed in the post offices well in advance. The "A" signs may be left indefinitely in excellent localities, or picked up on the return, or on the following visit.

The truck in use for recruiting, the one-half ton type, with canvas cover, fitted with longitudinal seats for the applicants, and with an electric heater for frigid weather, is generally suitable. The recruiting service, however, has a decided preference for the station wagon type which would be more economical of operation.

Radio Publicity

Radio "spot" announcements and occasional broadcasts have proved a worthwhile adjunct that depends largely upon the spirit of cooperation on the part of the studios. The radio station at Meridian, Mississippi, has long been a valued ally in the New Orleans District, and directly responsible for a considerable volume of recruits. The time element rarely permits radio activity beyond the "spot" announcements that are run in the brief intervals between news broadcasts and commercial programs. Lengthy broadcasts, for this reason, are usually impracticable. Their most effective form is in dialogue, with the announcer interviewing an officer or recruiter. "Spot" must be brief and catchy, the broadcasts colorful and unstereotyped.

Sound Films

The early supply of two sound films by the Publicity Bureau, "The U. S. Marines" and "Soldiers of the Sea," were welcome additions, and proved so popular that at the peak of recruiting the supply was doubled. For years the naval recruiting service has made excellent use of this medium. Exhibitors, as a rule, are glad to have them as "fill-ins" on broken schedules. They are best placed in the hands of chain or circuit managers, and routed over a wide schedule of theaters. One CCC camp in Louisiana reported that the showing of "Soldiers of the Sea" was not only enthusiastically received by its 190 enrollees, but by twice that number of townspeople, and requested additional films. In the case of the CCC camps they were furnished as educational exhibits, and not as a form of recruiting activity. Again, in Milledgeville, Georgia, "Soldiers of the Sea" was witnessed by 10,358 spectators in its week's run. The films in question came in two sizes, 16 and 35 mm.

Recruiting Literature

Present day recruiting literature is of considerable volume and variety, ranging from the full sheet colored posters to window and street-car cards. It embraces application form blanks, postmaster cards, folders in attractive colors, letters to postmasters, prospects, next of kin, ex-marines. Among the folders are those bearing the titles Fifty Facts, U. S. Marines, Our Flag, Traditions, Magic China, Semper Fidelis, Your Career as a Marine, Recruits at Parris Island, and others. One of those most in demand is that of the Marine Corps Institute.

A popular form is the Marines' Hymn, arranged for band concerts, orchestra or the piano. In the South there has been a remarkable growth of high school bands. In New Orleans, a city whose Latin influence is reflected in its Mardi Gras and holiday parades to an extent hardly known to other cities, all high school bands have the Marines' Hymn and play it lustily and well in parades and at athletic events. There was an amusing instance of its popularity when a naval officer addressed the largest high school in the city on Navy Day. At its conclusion the principal

The five-cent candy bar

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FOX-CROSS CANDY COMPANY
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asked if he would like to have the school, a coeducational one, sing for him. The song was the Marines' Hymn!

The cost of the recruiting literature distributed during the drive totaled $5,251.51 for the entire recruiting service. It is interesting to note that the cost in the first month of $1,529.70 climbed to a peak of $2,982.32 in the following month, and dropped to $254.79 in the closing month, good evidence of its early and effective distribution.

The Stress of Education

Early in the drive when the press and the people were articulate in their demand to Keep Out of War, the Southern Division began to stress, as an offset, the educational opportunities that offered to recruits. Every effective means of putting over this campaign were employed, and the results were highly profitable. The Director of the Marine Corps Institute reported under date of November 30 that a total of 500 first enlistments had enrolled in the various courses. A following chapter will throw more light on the educational factor. The climax of the campaign was reached in connection with the observance of the Marine Corps Birthday on November 11 in the Southern Division. Letters were addressed well in advance to the governors of the eleven southern states, reciting salient facts of the history of the corps, stressing in their conclusion the educational opportunities of enlistment, and requesting that each governor give out a press release on the Marine Corps Birthday and its 164th anniversary, from the respective State Capitols. With no known exception was this request ignored, and the majority of the governors wrote in person that it would be a pleasure to grant the request.

It is a pleasure to quote from the letter of the Governor of the State of Texas:

"It is my fond hope and desire that our country will not become involved in the foreign conflict, but at the same time we must use every precaution to protect ourselves from aggression."

Through the cooperation of the Macon District the Governor of Georgia, the Mayor of Atlanta, and the President of the Atlanta Chamber of Commerce went on the air in stressing the significance of the anniversary, and what the Marine Corps had to offer to the youth of Georgia, with special stress on the opportunities to complete an education that may have been interrupted for economic reasons.

What Attracted Applicants?

During the drive a reserve officer on the west coast advanced as his conviction that travel and adventure were no longer potent factors in drawing men into the service, but the more prosaic ones of unemployment and similar reasons. The officers of the Southern Division differ strongly from his conclusions. While travel and adventure may no longer be dominant factors they bulk large in the South.

Dallas reported them as ranking high, as did Oklahoma City. Birmingham cited education and employment. Raleigh strongly stressed the thirst for educational advancement, and the opportunities for it as offered by the Marine Corps Institute. Macon reported that the campaign stressing education had a potent effect on parents who had worried about the imminence of war, and Savannah concurred in the same view.

Certain figures compiled by the Publicity Bureau from all sections of the country rated educational opportunities as leading with 34 per cent recruits, career and military training ranking second with travel and adventure a tie at 22 per cent, unemployment fourth with 12 per cent, aviation 5 per cent, believed Marine Corps best branch of the service 3 per cent, and friends and relatives in the Corps last with 2 per cent. It will be noted that 78 per cent, a high figure, were attracted by the factors of education, travel and adventure, career and military training.

The factor of education was stressed with literature covering the Marine Corps Institute activities, by press releases and radio. It had an excellent effect on parents, disturbed by the European conflict, and a fear that the United States would become involved. Applicants listened attentively when recruiting officers outlined the educational advantages. Fully 76 per cent in the South had completed at least one year at high school, and almost 24 per cent had graduated. In the disturbed economic conditions they had a feeling that further study along the lines that appealed to them offered security, and that they would be better fitted at the end of their enlistment to find lucrative employment. That factor, combined with the worthy career of a marine with his security and retirement provisions impressed them.

As to the impression of the war talk, at a height when the drive began, Oklahoma City reported that in that highly patriotic community, "where men are men and women are glad of it," the general attitude of parents towards their sons' enlistment was that of "if we do have war we want our sons to be trained, for they will have to go anyway." The Marine Corps Institute appealed strongly.

In the service in past years we have too often had reason to complain that illiterates have been enlisted. In these days there is no place in the Marine Corps for the borderline recruit who can just get by with reading his enlistment contract. As one officer aptly phrased it: "Warfare has gone far along the road of technical advancement. A strong mind is more important than a strong back in a motorized column." The advantages of the Marine Corps Institute should be encouraged, and supplemented by post schools.

As to the factors of travel and adventure the mistake can be made of stressing it too strongly. Honesty compels the admission that they are not a constant or guaranteed part of a marine's daily life.

Attitude Towards Public and Applicants

Diplomacy is an ingredient that goes far to lubricate the recruiting machinery. It should be borne in mind that the American public, as a whole, is not only not conversant with the military life, but has acquired a volume of misinformation on the subject. The rural districts of the Deep South are prone to believe that recruiters are out to ensnare their vcitims by fair means or foul. Applicants are prone to approach a recruiting station in fear and trembling.

Courteous treatment of applicants, often accompanied by their parents, and scrupulous courtesy and fairness in their handling, are imperative. A rejected applicant, properly handled, is apt to return with a friend who can pass,

and he becomes a potential recruiter. Diplomacy, courtesy and tact reap a rich reward.

The Medical Work

At the outset of the drive the Bureau of Medicine and Surgery assigned active or retired medical officers to the newly constituted districts, and two chief pharmacist mates to all districts. Its cooperation was always prompt and complete. When a delay was unavoidable the services of efficient civilian medical examiners was authorized. At all sub-stations this procedure obtained.

The experience of recruiting officers coincide in that the officers of the higher grades, or retired officers of experience, are highly desirable in the recruiting office. They have a deeper knowledge of psychiatry, a well-grounded philosophy that are invaluable in weeding out the mental or physical border-line cases, and are particularly adept in drawing out the applicant by skillful questioning. Through their wide service experience, which usually includes service with the Corps, they are not only thoroughly grounded in service requirements, but are expeditious in handling a flow of applicants. Younger officers naturally lack these qualities of experience, tend to draw a rigid line, to "follow the book" so closely that much good material is discouraged and lost.

The results of examinations in the other divisions probably closely parallel those of the Southern Division. The third month of the drive, November, may be taken as a typical month in the Southern Division. The total of acceptances for that month was 28.6 per cent of bona fide applicants. For the four months preceding, two of which were in the drive, the percentage was 36.1 per cent, ample evidence that the pre-emergency standards had not been relaxed. Districts varied during the month of November from the low acceptance of 13.8 per cent in the Little Rock District to the high of 44.1 per cent in the New Orleans District. The high percentage of the latter district may well be attributed to the fact that, as an old-established district, its matured and highly developed flow of publicity attracted material superior to that of a new district that lacked this factor. On the whole the five months of the drive in the Southern Division averaged the conservative percentage of thirty per cent acceptances.

It is of interest to give the composite picture of the average recruit that was compiled by the Macon District, Texas and Oklahoma, with their exceptionally fine material, would undoubtedly exceed the measurements of the Macon District. Age—21. Height—68½ inches. Weight—150. Chest—36 mean. Waist—32. Eyes—brown. Native born. Minimum high school education—one year high school. Favorite specialization—mechancis, radio.

When the Macon recruit reported in at the Parris Island boot camp he called for a 7½ hat and 8-E shoes.

The great majority of the southern recruits come from the rural farming areas. They are native born Americans, with a military tradition, used to outdoor life, fishermen, trappers and hunters, with the background of sound family. Louisiana, with its French influence, contributed many recruits with a fluent knowledge of French, a helpful asset.

Reservists on Recruiting

On September 21 the Major General Commandant authorized employment of a limited number of reservists of the Fleet Marine Corps Reserve, Class I, (a) (b) (c) for duty at navy yards and stations, and on recruiting. It was specified that the duty would be voluntary and only for the duration of the existing limited emergency. In the case of those ordered to recruiting it was stated that their station would be preferably near their homes. These men were required to pass the necessary physical examination, and returned to active service with the rank held as reservists.

Lists of all sixteen and twenty-year-old reservists within the respective divisional boundaries were forwarded to each division, with symbols indicating clerical qualifications and prior recruiting detail, and the age limit was set at fifty years. From these lists the recruiting service contacted reservists direct. Selection from the lists was primarily designed to fill vacancies caused by the return to barracks of unsuitable recruiters.

While a number proved of value, especially in charge of sub-stations, others proved difficult to fit into the recruiting machine. In a number of cases their rank was such that

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they could not be well employed except in charge of a sub-station. Their tenure of service was uncertain. In the future it would appear advisable to reduce the maximum age limit, and to detail none above the rank of sergeant.

The CCC and NYA

In accordance with the policy of the Army Corps Area commanders every effort was made to avoid encroaching upon the recruiting restrictions laid down in those areas. No active recruiting was resorted to, and the only procedure allowable was to forward certain pertinent recruiting literature and sound films to camps. Prior to doing so, however, the district officer concerned addressed a letter to the District Commander of the CCC enrollees, requesting his permissoin. As a rule there was no objection on their part, and as a rule the enrollees who, at the end of their tour, did apply for enlistment, were excellent material. In the case of the NYA, or National Youth Administration stations, no such restrictions applied. It should be stated that the restrictions relative to the CCC camps applied equally to army recruiting.

Post Recruiting

Recruiting by certain designated barracks, fifteen in all, was directed by the Major General Commandant on November 14 to supplement the activities of the regular recruiting service. Nine were within the boundaries of the Eastern Division, three in the Western, two in the Southern and one in the Central Division.

At each of the designated barracks a traveling party of three recruiters was organized, and furnished with a truck and transportation orders. A preliminary study was made of the territory within a radius of 150 miles of the barracks, and the territory to be covered on each trip was circularized well in advance. Notice of the trips was given to its press, radio stations, mayors, postmasters and other officials. The total secured in the drive was 119 first enlistments, with the Pensacola barracks leading with the gratifying total of 31. On the whole the comparatively small number enlisted would indicate that recruiting is a specialized trade.

Cooperation

No article on the recruiting drive would be complete that did not give tribute to the cooperation extended, and especially that of our sister services. At the outset of the drive, through the courtesy of the Inspectors of the Southern and the Southeastern Recruiting Divisions of the United States Navy, the Southern Division was immeasurably aided in the organization and expansion of new districts and sub-stations.

Officers and men of the naval recruiting service aided willingly in the loan of temporary space, mimeographs and supplies, advice and information on locations and local conditions and, especially in their full-hearted comradeship. The United States Army displayed the same cordial attitude. In the case of Memphis, where diligent search failed to find rental free space, the officer in charge of that district placed one of his rooms at our disposal throughout the drive.

Federal, state, county and municipal officials, with but scant exception, not only gave all possible cooperation, but expressed their pleasure in having the Marine Corps represented in their communities. Certain patriotic and fraternal orders were of valued help in many instances in solving the vexatious problem of space.

Above all the postmasters of the southern cities and towns were an invaluable ally. Not only did they furnish space when it was humanly possible to do so, and bend over backwards in their desire to furnish it, but their advice and personal cooperation often secured county or municipal space that might well have been overlooked. They were of the greatest value in placing recruiting cards and posters, furnishing the names of potential recruits, placing press releases.

When the order to close certain districts and all substations arrived, letters were addressed to all custodians of rental free space that had been occupied. Among the answers received it is a pleasure to quote from two. The postmaster of Tampa, where a reservist gunnery sergeant had done excellent work, wrote: "I assure you it is my pleasure at all times to be of any assistance. . . . Especially is this true with the marines, on account of my having been more closely associated with this branch of the service."

The custodian of the Mobile Court House wrote: "It is so seldom in these hectic days that courtesies between officials are recognized, your expression of appreciation for the small courtesy extended the Marine Recruiting Service is an innovation; and I want you to know that if I can be of further service, please let me know."

Incidentally the writer, the Hon. Joseph H. Lyons, has a national reputation among naval historians for his intimate knowledge of the history of the Battle of Mobile Bay, and his research into its many interesting details.

Recommendations

The following recommendations are submitted in the hope that a future recruiting emergency will meet with the early and complete procurement that an emergency demands; to enlist up to any authorized strength before voluntary recruiting is followed by a different process, that of registration and induction.

(a) Adoption, through legislation if necessary, of a procedure by which the present procurement of commercial space can be had by the officer on the spot. This would, as a rule, expedite the establishment of a new district or sub-station, by an average of two or three weeks.

(b) An executive order giving an armed service priority in the assignment of rental free space in federal buildings.

(c) Accumulation of an ample stock of all necessary supplies, to be held in reserve for immediate shipment.

(d) More rigid requirements for new recruiting personnel, stressing clerical qualifications; and the establishment of schools for their training at the larger barracks when a recruiting emergency appears imminent.

(e) Officers ordered on emergency recruiting duty should be armed with detailed printed instructions in addition to the provisions of the Marine Corps Manual. This is doubly important if an officer is not well versed in quartermaster work and procedure.

(f) In the initial supply should be included a mimeograph or duplicating machine with ample supplies, sufficient typewriters, and filing material.

(g) Replacement of the present type of recruiting truck with the station wagon type.

(h) A moderate monthly allotment of funds to each district for miscellaneous supplies that can be best had from local sources.

(i) Permanency of the present enlisted recruiting personnel and promotion for its key men.

CATERPILLAR TRACTOR CO. OFFICERS ELECTED

J. D. Fletcher, Export Sales Manager, and T. R. Farley, assistant to the President, have been elected vice-presidents of Caterpillar Tractor Co., it was announced following the Company's annual meeting, held in San Leandro, California, March 26.

Mr. Fletcher will continue as head of the export department, the position which he has held for the past ten years, and in which he gained wide recognition in the field of international trade relations. He is a Director of the National Trade Council, Inc.

Mr. Fletcher was born in Pasadena, California, where he received his early schooling. He graduated from the University of California with a Bachelor's Degree in 1907, and obtained a Master's degree two years later. In 1910, after a year at the institution in connection with University extension work, he engaged in the shipping business. From that occupation he was drafted during the war into the Marine Transportation Division of the Food Administration in Washington. He was also associated with the Commission for Relief in Belgium, and the American Relief Administration, both in Washington and New York.

After the Armistice, he helped form an export company in New York, and for five years participated in its rapid growth. June 1st, 1929, he entered the employ of Caterpillar Tractor Co., and the following year was made Export Sales Manager.

Mr. Farley, who is abroad studying export markets at the present time, will retain his numerous administrative duties.

Born in Ipswich, Massachusetts, he was educated in eastern schools, specializing in engineering. Upon graduation, he went to work for the New England Telephone and Telegraph Co., and later for the Pierce-Arrow Motor Car Co. In 1916, he enlisted in the United States Army, and saw active service during the World War. When he received his honorable discharge in May, 1919, he was a Captain.

In June of that year, he went to work for The Holt Manufacturing Co., one of the predecessors of Caterpillar Tractor Co. When the present company was formed, he continued as an employee, and rose steadily to his position as assistant to the President.

The Marmor-Herrington Company, Inc., of Indianapolis, Ind., have announced a new series of trucks, the DSD series, available in thirty-three different models with gross capacities up to seventy thousand pounds. The firm will be glad to furnish an illustrated folder containing miscellaneous information and a summary of important features of the new designs upon request.

LEGISLATION

(*Continued from page* 10)

"That the number of cadets now authorized by law at the United States Military Academy, and the number of midshipmen now authorized by law at the United States Naval Academy, are each hereby increased by forty from the United States at large, to be appointed by the President from among the sons of officers, soldiers, sailors, and marines of the Army, Navy, and Marine Corps of the United States, including members of the Army Nurse Corps (female) and Navy Nurse Corps (female) employed in the active service by the War Department or Navy Department, who were killed in action or have died, or may hereafter die of wounds or injuries received, or disease contracted, or preexisting injury or disease aggravated, in line of duty during the World War, or of sons of veterans who are in receipt of compensation for service-connected disabilities at the time their sons may be eligible for appointment to either of the service academies."

A similar bill, H. R. 9506, was introduced in the House of Representatives on April 23, 1940. This bill omits the provision for sons of veterans in receipt of compensation, and adds a provision that the determination of the Veterans' Administration as to the cause of death shall be final and conclusive and shall be binding upon the Secretary of War and Secretary of the Navy, respectively.

Increased Retired Pay for Active Duty Since Retirement

Bills H. R. 9746 and S. 4089 would authorize percentage increases in computing the retired pay of certain retired officers of the Navy and Marine Corps for active duty performed subsequent to retirement. Retired officers now receive increases for all active duty performed since retire-

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ment in the computation of their longevity pay and pay periods, but not percentage increases. The Bills as introduced are worded as follows:—

That in the computation of the retired pay of officers of the Navy and Marine Corps heretofore or hereafter retired with pay at the rate of 2½ per centum of the active-duty pay received by them at the time of retirement multiplied by the number of years of service for which entitled to credit in the computation of their pay on the Active list, not to exceed a total of 75 per centum of said active-duty pay, active duty performed by such retired officers subsequent to the date of their retirement shall be counted for the purpose of computing percentage increases in their retired pay. These increases shall be at the rate of 2½ per centum for each year of active duty and a fractional year of six months or more shall be considered a full year in computing the number of years: Provided, That the increased retired pay of such retired officers shall in no case exceed 75 per centum of the active-duty pay received at the time of retirement: Provided further, That no back pay or allowances shall accrue by reason of the passage of this Act.

ENGINEERING PROBLEMS OF MARINE BRIGADES

(*Continued from page* 9)

One of the most urgent problems faced during a landing attack and occupation will be water supply. It can be anticipated that troops will carry with them from their transports sufficient water for the first twenty-four (24) hours. At the end of that period the engineer battalion will be required to have water distributing points established well forward. This water initially must be furnished from the transports. It can be transported ashore in the tanks of lighters and by the use of tarpaulin or canvas storage basins rigged in standard boats. Equipment is provided for pumping this water ashore and for storage basins for its reception and storage. It must then be chlorinated, because if it is condensed under high vacuum from contaminated water, the temperature of evaporation is not sufficiently high to kill all bacteria. The Marine Corps standard water purification unit is very similar to the Army unit except that by cutting its capacity in half it was reduced sufficiently in size to mount on a small trailer thus giving a reduction in weight and size. The marine brigade is equipped with three (3) of these units. Sufficient water trailers, 300 gallon capacity, are provided to establish water distributing points at a distance not to exceed ten (10) miles inland. It is anticipated that combat units will draw water from these water distributing points in milk cans with which each unit is equipped. The necessary hand and power pumps are of course provided for ease of handling of this water.

Unfortunately there is no certainty that the transport supply of water will be adequate. Ships of war have distilling apparatus to care for their needs but the transports converted from merchant vessels normally will not. Merchant vessels as a general rule carry sufficient water in the tanks to supply their needs between ports of call but this capacity will not provide a supply for a landing force over a protracted period. Obviously all local possibilities must be exploited and an ample supply of drive

well points are included in the battalion equipment as well as a light well rig under special equipment. In many localities however there is no supply of potable water as wells merely serve to tap a salt water supply. This situation leaves the alternatives of the provision of a ship specially equipped for distilling, the inauguration of a water barge service from the nearest source of supply, or the development of small portable distilling units. Although salt has been removed from salt water in the laboratory by the passage of the water through a synthetic resin and the resin later rejuvenated as far as is known no steps have been taken to perfect this process. All the above mentioned alternatives have obvious objections and the solution of this problem is still being studied.

The task which will probably tax the ingenuity of the brigade engineer to the limit of his capacity will be the grading of aviation fields. Should the aircraft group be carrier borne to the theater, the commander naval attack force will probably want the carrier released at the earliest practicable moment due to the vulnerability of aircraft carriers to submarine and air attack and the urgent requirements elsewhere for this type of vessel. Therefore the repair of any fields ashore, or the clearing and preparation of new fields will be paramount. To accomplish this the engineer battalion has in its special equipment a light gasoline shovel, six (6) dump trucks, a bull dozer, six (6) rotary wheeled scrapers, a power winch (stump puller), and of course the road grader and plow which are available to assist in this work. Admittedly this is not very much equipment for this purpose but it will permit any level areas to be cleared and smoothed out and Marine Corps aviation through its experience is accustomed to the use of fields of minimum dimensions. A steel grill work similar to that reported in use by the British in France might offer possibilities but its weight and bulk would probably be prohibitive.

In a situation that requires a landing on a restricted beach exposed to adverse sea conditions, the beach may become so congested with swamped or grounded boats as to make landing of additional troops or supplies nearly impossible. This state of affairs will tax the resources of the shore party commander and beachmaster to the utmost. If this situation can be foreseen the power winch will be of considerable assistance to this shore party provided they can find a suitable anchor to seaward as this unit will develop a 100,000 pounds line pull. The unit itself consists of a standard commercial stump puller, geared to drive from the rear power take-off of a tractor. It is anticipated that this unit will overcome any difficulties involving the movement of heavy weights that may be encountered, as well as being of considerable assistance in clearing of timber.

Demolition which may be required ashore will be expedited by the use of one trailer mounted air compressor and accessories. It is not anticipated any operations which are foreseen will require anti-mechanized defense beyond a scale which can be improvised from material at hand. In a defensive situation the pile driving leads of the gasoline shovel, and a concrete mixer will be of assistance in this improvisation. Undoubtedly when their use can be foreseen quantities of the anti-tank mines

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The November 1940 number of the Gazette will announce the results of the competition.

now being developed by the Ordnance Corps, U. S. Army, will be carried.

It has probably been noted that no special provision has been made for river crossings but it is anticipated that any situation of this nature encountered can be met with the floating equipment of the Navy present or the temporary piers available.

To facilitate the employment of the crane and other tools requiring power from a take-off, all tractors in the engineer battalion are equipped 50 per cent with rear power take-off and the remainder with double drum power control units. This distribution of power throughout the battalion permits of a shift of power driven tools to various tasks without an accompanying shift of the tractors.

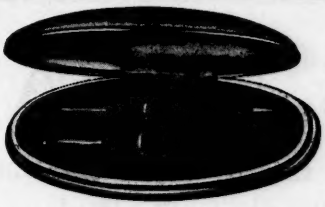
Camouflage problems remain routine except that the supply of artificial camouflage material available may always be expected to be meager.

The engineer battalion will carry and issue the infantry intrenching tools but other than that it may be expected that the provision and issue of additional engineer material to the brigades will be the function of the brigade supply system.

The provision of shelter except temporary, and the execution of any large engineering projects of a permanent or semi-permanent nature is a duty of the civil engineer crops of the Navy.

Due to the nature of this article the combat requisites of the Marine engineer battalion have not been discussed but it goes without saying that Marine Corps Engineers are combat engineers with the word "combat" emphatically stressed and as such their combat equipment includes rifles and machine guns for use particularly in the defense.

While transport loading, unloading and transportation of personnel and material to the beach present more engineering problems, their discussion here has been omitted due to the fact that they are considered a problem of the forces afloat. The Marine Corps is naturally vitally interested in those problems and is giving all practicable aid to their solution. The engineering problems of the marine brigades will vary with every situation and their expeditious solution will substantially affect the success of every operation which may be undertaken by these brigades.



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